COMPREHENDING INCLINATIONS TOWARDS AUTONOMOUS VEHICLES

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Abstract

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Many of today's autonomous vehicle (AVs) improvements involve overcoming technology barriers to AV readiness. However, once AVs are out, acceptance and people's willingness (APW) to use remain a concern. As a result, the question arises. Are we attentive enough towards humans' aspects in the evolution of AV technology? Do we need to? The present dilemma around autonomous vehicles is of their acceptance rather than technological advancements. Many academics have investigated autonomous vehicles using questionnaires and different studies to discover how individuals can act. The issue is that individuals do not always do what they say, which does not usually describe a definite image.

Nevertheless, on the other hand, we believe psychological aspects signify people's state of being. So, as a response, we seek to attain an understanding by studying human psychological aspects. This study seeks to streamline interdependency between human psychological elements and how people receive the information through various mediums and channels. With these two aspects combined, we attempt to comprehend people's inclinations towards AVs. The study resulted in a theoretical comparative estimation table (CET) and CET Hierarchical Concept Map through our reviewed literature. The study thus intended to understand the riddle of acceptability via people's psychological elements through the proposed extended theoretical comparative estimation table (CET) table. Further, through the application of the extended CET table, we present our findings comprised of our studied references with the visualization to showcase the people's viewpoints on the tendency towards autonomous vehicles.

We believe the study provides vision and puts psychological elements into consideration of tackling challenges and skeptical side of concerns of APW of AVs. It also fosters interested future researchers to comprehend APW challenges better with corresponding attributes used in the CET table and CET Hierarchical Concept Map.

Keywords: psychology, acceptance, human aspects, autonomous vehicles, visualization and analysis, willingness.

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List of Acronyms

AV - Autonomous Vehicles

CET - Theoretical Comparative Estimation Table

APW - Acceptance and People's Willingness

RROP - Reaction, Response, Opinion and Perception or Point of view

Footnotes

All references cited throughout the thesis are listed in the bibliography section at the ending. The appendix section contains supplementary information that was gathered during the visualisation analysis process. Include the seventy -four references or sources as well, each with a heading that includes a hyperlink to the source. In the absence of implicit dates in references or sources, an explicit date has been chosen. The date chosen is solely determined by the date of information accessed or relative date of the cached information, marked (*) by us during the reference study.

Chapter 1

Introduction and Problem Statement

1.1 Background

Self-driving cars or so-called autonomous vehicles offer a great deal of excitement and zeal to technological evolution. The concept itself is so full of excitement where self-driving vehicles can perceive the surrounded environment and navigation within a defined range without human intervention. To understand the concept and make a vision into reality, one must understand the involvement of multiple heterogeneous technologies and their collaboration, but proper functioning is critical. The authors Jo et al [1] refer to autonomous cars as integrating two industries: the automotive and mobile robots. Dealing with the embodiment of multiple and heterogeneous technologies also leads to multiple problems and challenges from various fields, not only technical but also from nontechnical fields. It is clearly stated by Shariff et al [2] that Many of them are speeding past persisting technical challenges to AVs readiness. Nevertheless, one of the most important or, if not the most significant, challenge is adopting autonomous vehicles (AVs) and willingness to use technology and acceptance, which associate with psychological aspects and mediums or channels through which people receive the information affecting the individuals.

1.2 Thesis Objectives

Many companies are splashing billions of dollars into autonomous vehicle research and its development in the technological progression era. Nevertheless, we believe, not ample consideration is delivered on how humans will react to autonomous Vehicles. Regarding the future in mind, people quickly tend to imagine a city full of autonomous vehicles but rarely discuss how human behaviour might be? in terms of acceptance of autonomous vehicles. Many researchers have studied by asking the people about the autonomous vehicle with questionnaires and surveys to determine what people might do. So, the problem statements are,

1. First the dilemma is, people do not always do what they say, which generally do not outline concrete statistical representation.

2. Another point is that optimistic prediction by an interested organization often overlooks the significance of potential conflicts between the manufacturing organization goal versus community goal.

3. The severity of technical glitches or failure for interested organizations might be different for users. For example, organizations might notice glitches as seldom fatal. However, users notice them as deadly, which ultimately affects the way people look at them.

So, it is highly crucial to understand genuine people's inclinations and ensure demands remain the priority and not vice versa, which remains a significant gap. Thus, our study intend as per below.

1. This research aims to study people's inclination towards autonomous vehicles (AVs) through the human psychological elements and influential mediums or channels to understand how people receive information that could potentially influence their inclination, especially related to autonomous vehicles (AVs).

2. The study aims to create a theoretical comparative estimation table (CET) and CET Hierarchical Concept Map thorough literature review and propose a theoretical CET table and CET Hierarchical Concept Map to interlink psychological elements and their influential channels.

3. The study aims to provides insights to interested manufacturers and fellow researchers to tackle acceptance and people's willingness challenges of AVs through streamlining human psychological elements and influential mediums or channels' points of view.

4. The application of the CET table seek to provide thought and puts psychological elements into consideration, and offer a supplement knowledge to tackling the challenges and skeptical side of concerns with APW of autonomous vehicles and potential benefits for society.

5. The study attempt to foster interested future researchers to comprehend APW challenges better with corresponding attributes used in the CET table and CET Hierarchical Concept Map. Based on the literature study, the classification of sub-categorization of the expanded CET table was discovered and decided, with additional visualization to show findings.

1.3 Thesis Contribution

We believe the best way to understand people's and communities' moral principles is through their psychological elements. People can say one thing and do others, but their psychological elements might be the way to understand the riddle towards AVs acceptance. So, we seek to analyze the enigma of acceptance of autonomous vehicles through people's psychological aspects. We believe that if we comprehend the psychological aspects of people and alleviate psychological roadblocks, which restrains them from accepting AVs, we could accelerate the acceptance process toward autonomous Vehicles.

In this thesis, we seek to streamline the compounded psychological terminologies. Throughout our study of literature reviews and multiple online articles (published and independent) that we studied, we came across more than 20+ terminologies 3.1.1. However, for this study, considering the vast scope of the field, we limit them to eight terminologies from different branches of psychology based on the selection criteria 3.1.2 we observed during the literature review study. We believe that these eight terminologies are fundamental to individuals' reaction, response, opinion and

Perception or point of view [RROP] towards how people show their willingness and acceptance towards certain things. Also, we accompany them with the study of mediums or channels through which people receive information and go through psychological processing once received. In closing, we seek to streamline our extracted data to understand the flow of information and create CET Hierarchical Concept Map 3.3.1. Furthermore, propose Theoretical Comparative Estimation Table (CET) 3.3.2 with the thought of generating binary standpoints.

We further put an effort to extend the study we performed on psychological aspects. So, we revisited the literature review and analyzed them further in-depth to extract the classification of sub-categorization cases, forming an extended CET table 3.3.3. Further on, the application of the extended CET table performed through the studied references consists of reports, feeds, and articles. The references considered for the study represent the authors' viewpoints and are collected from educated individuals with considerable knowledge in the field. We believe all references collection represents fundamentally, in short, social representation of a social image due to the nature of the references.

Finally, we present the findings with the visualization to showcase a better understanding of the author's viewpoints and skeptical side of concerns towards the inclination of AVs through our subjective context analysis strictly based on the selected classification of sub-categorization of elements interpreted from the literature we reviewed, which we initially integrated into an extended CET table with consideration of generating binary standpoints.

1.4 Thesis Structure

The following chapters will be as follows.

In the second chapter, we discuss the literature review we studied on psychological elements and factors. In addition, we will discuss the influential mediums and channels through which people receive the information, along with the fundamentals behind the creation of the CET table.

And in chapter three, we present the research methodology. Further, we brief about the selection criteria which we choose for the creation of the extended CET table. In addition, we uncover the method used in the application of the extended CET table to obtain the findings. Next, we reveal our contribution consists of the proposed CET table, the CET Hierarchical concept map and the extended CET table with a classification of sub-categorization based on the literature we reviewed. Further, we present our findings in a detailed manner and in the discussion, we discuss the results and concerns as well as additionally performed some validation of our study's findings and insights with some of the credible sources, which supplements as a considerable validation and comfort to our intended study.

At last, the conclusion section includes the summary, strengths, limitations and future direction of our study. After closure, references will be displayed, which are used for the whole study along with appendices which include of collected sources for further visualization analysis.

Chapter 2

Literature Review

Psychology is a hugely complicated subject. When compared to technical subjects, it contains so many variants and branches that it may be daunting for an individual. As a result, despite the fact that there has been astronomical research on psychology, we feel it is difficult to obtain binary solutions to the difficulties and challenges within the field of study. Furthermore, we noticed a similar occurrence in our study of literature review. Enough study has been conducted to analyse and link the psychological obstacles and problems associated with the acceptance, willingness to use, and adoption of AVs; Shariff et al [2], Liu et al [3], Lee and Kolodge [4], Liu et al [5], Gill [6], Xu et al [7], Du et al [8], and Hohenberger et al [9] are some of them we studied. Morality, fear, people's desire and willingness, trust, responses and reactions to worry, views, Ethical and Social Dilemmas are all covered in studies. Although the terminologies employed were hazy, we did discover a strong relationship between them. So et al [10] connect psychology, emotions and decision making, while Maurer et al [11] and Fraedrich and Lenz [12] connect acceptance, willingness, and adoption with psychological aspects and decision making. Furthermore, we discovered that how people acquire information through various mediums or channels has a major impact on psychological elements Du et al [8].

2.1 Review of Psychological Factors

According to author Apurva S [13], psychology is the science of human behaviour that includes specific behaviour that applies to anything an individual does. There

are multiple expressions in which humans behave, but two important and primary ways are covert and overt. Covert human behaviour is when a person or an individual expresses inside. In contrast to it is Overt behaviour which an individual express outside. For example, individuals express themselves with symbolic adoption called covert behaviour and user acceptance as examples of overt behaviour expressions. For our study, to begin with, we observed the significance of emotions and their connection with psychology and decision making So et al [10].Thus, under these terminologies, we decided to study them further. We highlight the summary table at the end of each psychological section of the research evaluation. The summary table represent the literature review we conducted, together with remarks, emphasising the study's principles which we base our subsequent investigation of the literature.

2.1.1 Emotions

According to an article written by Apurva S, [13], Emotions represent a state of being. It has to do with impulses. It also elicited emotional, bodily and psychological reactions. When it comes to coping with emotions, each person is unique. People typically make rational judgments, but when emotions are volatile or intense, people may make decisions based on feelings that we cannot deny. From the literature we reviewed, we understood emotions into two categories: good feelings and negative emotions. Nonparticipation, disinterest, and non-cooperation may result from a negative response. Positive emotions, on the other hand, may have opposing effects to negative emotions. Optimistic emotions can instil hope or positive thinking. Some guidelines for emotional regulation were proposed by Royce [14]. Avoid emotion-provoking events, for example, or change the emotion-provoking scenario to manage emotions. Nonetheless, it requires a great deal of self-discipline and emotional control.

Fear

Fear is a feeling. Many research on crises fails to mention anxiety or fear.Carlsen and Liburd [15], Faulkner [16], Mansfeld [17] and Ritchie [18] Fear regards fundamental to the characteristic by research talked about these words reasonably quickly without much explanation and used the language interchangeably Barton [19], Hitchcock and Putra [20] and Sonmez et al [21]. For example, Kingsbury and Brunn [22] make no distinction between anxiety, risk, safety, and Fear Lepp [23]. Fear is a primordial

feeling shared by all living things Dolnicar [24]; moreover, a distinctly underdeveloped topic says Gold and Revill [25]. Fear is a primal emotion communicated by all living creatures Gold and Revill [25], and it has adaptive value, and that is the reason which allows us to avoid dangerous situations Skre et al [26]. Fear also considers a defensive response to avoid current threats by Cisler et al [27] and Royce [14]. Epstein [28], Barlow [29], Sylvers et al [30] demonstrating that fear is an aversive emotional state that motivates people to avoid a specific and imminent threat, and Reiss [31] talks about three fundamentals of fears: Fear of injury, fear of anxiety, and Fear of negative evaluations. Skre et al [26] divide fear into various types; one example is fear of vehicles. People recognize fear when they see it or experience it, says Fennell [32]. Zheng et al [33], Dalrymple et al [34], Fung et al [35], and Lamb et al [36] that an increase in fear is directly proportional to the observation individual does by observing others' reactions and experiences. Duhachek and Iacobucci [37] study represented that fear triggers people's disengagement and emotion-seeking coping (self or social support) to escape and protect themselves. Cisler et al [27], LaTour and Rotfeld [38], Posey et al [39] fear, according to research, may influence an individual's attitude and protective behaviours toward a threat, causing people to recognize the seriousness of the threat and increase their drive for self-protection. Chen and Yang [40], Witte et al [41].

Table 1: Fear - Literature Review Summary Table Part-1

Author / s	Year	Factor	Topic	Remarks
J. R. Royce	1968	Fear	The nature of human intelligence	A defensive response to avoid current threats
J. C. Carlsen and J. J. Liburd	2008	Fear	Developing a research agenda for tourism crisis management, market recovery and communications	Fear regards fundamental to the characteristic
B. Faulkner	2001	Fear	Towards a framework for tourism disaster management	
Y. Mansfeld	1999	Fear	Cycles of war, terror, and peace: Determinants and management of crisis and recovery of the israeli tourism industry	
B. W. Ritchie	2004	Fear	Chaos, crises and disasters: a strategic approach to crisis management in the tourism industry	
L. Barton	1994	Fear	Crisis management: Preparing for and managing disasters	Fear as language used interchangeably
M. Hitchcock and I. N. Darma Putra	2005	Fear	The bali bombings: Tourism crisis management and con ict avoidance	
S. F. Sonmez, Y. Apostolopoulos, and P. Tarlow	1999	Fear	Tourism in crisis: Managing the effects of terrorism	
P. T. Kingsbury and S. D. Brunn	2004	Fear	Freud, tourism, and terror: Traversing the fantasies of post-september 11 travel magazines	Make no distinction between anxiety, risk, safety, and Fear
A. P. Lepp	2004	Fear	Tourism in a rural Ugandan village: impacts, local meaning and implications for development	
S. Dolnicar	2005	Fear	Understanding barriers to leisure travel: Tourist fears as a marketing basis	refer Fear as primordial feeling shared by all living things
J. R. Gold and G. Revill	2003	Fear	Exploring landscapes of fear: marginality, spectacle and surveillance	Refer fear as distinctly underdeveloped topic and Fear is a primal emotion communicated by all
I. Skre, S. Onstad, S. Torgersen, S. Lygren, and E. Kringlen	2000	Fear	The heritability of common phobic fear: a twin study of a clinical sample	Has adaptive value and divide fear into various types
J. M. Cisler, B. O. Olatunji, and J. M. Lohr	2009	Fear	Disgust, fear, and the anxiety disorders: A critical review	A defensive response to avoid current threats

Table 2: Fear - Literature Review Summary Table Part-2

Author / s	Year	Factor	Topic	Remarks
S. Epstein	1972	Fear	The nature of anxiety with emphasis upon its relationship to expectancy	Fear is an aversive emotional
D. H. Barlow	2004	Fear	Anxiety and its disorders: The nature and treatment of anxiety and panic.	
P. Sylvers, S. O. Lilienfeld, and J. L. LaPrairie	2011	Fear	Di erences between trait fear and trait anxiety: Implications for psychopathology	
S. Reiss	1991	Fear	Expectancy model of fear, anxiety, and panic	Mention three fundamentals of fears
D. A. Fennell	2017	Fear	Towards a model of travel fear	Recognize fear when people see or experience it.
D. Zheng, Q. Luo, and B. W. Ritchie	2021	Fear	Afraid to travel after covid-19? selfprotection,	Fear is directly proportional to the observation individual does
K. E. Dalrymple, R. Young, and M. Tully	2016	Fear	facts, not fear" negotiating uncertainty on social media during the 2014 ebola crisis	
I. C.-H. Fung, Z. T. H. Tse, C.-N. Cheung, A. S. Miu, and K.-W. Fu	2014	Fear	Ebola and the social media	
A. Lamb, M. Paul, and M. Dredze	2013	Fear	Separating fact from fear: Tracking flu infections on twitter	
A. Duhachek and D. Iacobucci	2005	Fear	Consumer personality and coping: Testing rival theories of process	Represent fear to trigger people's disengagement
M. S. LaTour and H. J. Rotfeld	1997	Fear	There are threats and (maybe) fear-caused arousal: Theory and confusions of appeals to fear and fear arousal itself	Fear may influence an individual's attitude and protective behaviours toward a threat
C. Posey, T. L. Roberts, and P. B. Lowry	2015	Fear	The impact of organizational commitment on insiders' motivation to protect organizational information assets	Fear increase their drive for self-protection
L. Chen and X. Yang	2018	Fear	Using eppm to evaluate the e ectiveness of fear appeal messages across different media outlets to increase the intention of breast selfexamination among chinese women	
K. Witte, J. M. Berkowitz, K. A. Cameron, and J. K. McKeon	1998	Fear	Preventing the spread of genital warts: Using fear appeals to promote self-protective behaviors	

Worry

Fennell [32] sees worry as a cognitive act rather than an emotional one, while admitting that the two are inextricably linked. Worry is described as an individual's endeavour to engage in mental problem-solving tasks for which the consequences are unclear and may be unpleasant. Larsen et al [42]; furthermore, disentangle worry from risk perception. Worry, nervousness, and apprehension are all used interchangeably with the term "anxiety." refer to Carnicelli-Filho et al [43]. As a consequence, we considered worry to be an emotion and separated the words Worry and Risk. They are miles apart if we use two terms appropriately, as stated in this study.

Table 3: Worry - Literature Review Summary Table

Author / s	Year	Factor	Topic	Remarks
D. A. Fennell	2017	Worry	Towards a model of travel fear	individual's endeavour to engage in tasks which the consequences are unclear and may be unpleasant
S. Larsen, W. Brun, and T. gaard	2009	Worry	What tourists worry about construction of a scale measuring tourist worries	Disentangle worry from risk perception
S. Carnicelli-Filho, G. M. Schwartz, and A. K. Tahara,	2010	Worry	Fear and adventure tourism in brazil	

Anxiety

We distinguish anxiety from worry since the term is frequently used in combination with concern. However, as discussed before in the section on worry, anxiety is distinct from worry. Other synonyms associated with anxiety include nervousness, which is also a component of fear, but we chose anxiety because, according to Brown [44], it is unavoidable. People are typically concerned about their safety and belongings, according to Ingram [45]. Because our study is oriented around acceptability and desire to engage in AV, anxiety makes more sense because it is directly tied to safety concerns, which are essential in AV concerns.

Table 4: Anxiety - Literature Review Summary Table

Author / s	Year	Factor	Topic	Remarks
L. Brown	2013	Anxiety	Tourism: A catalyst for existential authenticity	Mention anxiety as unavoidable and concerned over safety
G. Ingram	2002	Anxiety	Motivations of farm tourism hosts and guests in the south west tapestry region, western australia: A phenomenological study	

Risk

Risk and perceptions of risk are significant in a number of situations. Dolnicar [24] defined risk as a proxy for fear; hence, it elucidates the link between fear and risk. Roehl and Fesenmaier [46] classify risk into seven categories: equipment risk (breakdown), financial risk (value for money), physical risk (injury or illness), psychological risk (vacation does not reflect the tourist's self-image or personality), satisfaction risk (vacation is not personally satisfying), and social risk (vacation will affect others' opinion). According to Wong and Yeh [47], risk perception affects reluctance, which in turn influences decision making. Knowledge, on the other hand, can aid in the regulation of that relationship. Because our study is centred on the perspective of AVs, we highlight physical, psychological, and equipment factors, but especially satisfaction and reluctance, as we believe these words are directly related to the risk of AVs.

Table 5: Risk - Literature Review Summary Table

Author / s	Year	Factor	Topic	Remarks
S. Dolnicar	2005	Risk	Understanding barriers to leisure travel: Tourist fears as a marketing basis	Elucidates the link between fear and risk
W. S. Roehl and D. R. Fesenmaier	1992	Risk	Risk perceptions and pleasure travel: An exploratory analysis	Classify risk into seven categories
J.-Y. Wong and C. Yeh	2009	Risk	Tourist hesitation in destination decision making	Mention Risk perception affects reluctance, turn influences decision making

Trust

Numerous psychology research have produced numerous definitions of trust between humans and machines, but we suggest the one that we feel is most pertinent to our study's aims. As can be seen, a sizable number of them are. According to Deutsch [48], "belief in one's capacity to achieve what one wishes from another, rather than what one fears." Rempel and Holmes [49] a define trust as "the degree of confidence you feel when pondering the connection." and Holmes and Rempel [50] define trust as "the degree of confidence you feel when contemplating the relationship." On the other hand, trust is a nuanced concept. According to the aforementioned writers, machine responsibility will become increasingly essential in human-machine partnerships when humans choose to transfer autonomy and power to "intelligent," yet prosthetic, robots. The more authority they are allowed, the more critical it is for them to properly communicate the aim of their actions in order for people who utilise them to have a realistic expectation of their duties and to engage in fruitful discourse with them. The authors defined trust as an expectation based on past experience that varies in predictability, dependability, and reliability, in addition to faith. The human's ability to judge the predictability of the machine's behaviour will have an effect on the building of trust. Finally, because human trust is founded on observable computer behaviour, it must be visible. Assume a user has legitimate concerns about a machine or service. In this case, he will perform the task or tasks himself, leaving little or no opportunity for him to re-evaluate his mistrust, since the machine (or function) has been removed from the system and no longer supplies the required

behavioural data for re-evaluation.

Table 6: Trust - Literature Review Summary Table

Author / s	Year	Factor	Topic	Remarks
M. Deutsch	1973	Trust	The resolution of conflict: Constructive and destructive processes	Define trust between humans and machines, the degree of confidence you feel and human machine partnerships when humans choose to transfer autonomy and power to robot.
J. K. Rempel and J. G. Holmes	1986	Trust	How do i trust thee-trust is one of the most important and necessary aspects of any close relationship-by taking this trust test you can count the ways and understand the whys	
J. Holmes and J. Rempel	1986	Trust	Trust and conflict in close relationships	

Anticipation

Plutchik [51] postulated the existence of eight primal emotions: rage, fear, sadness, disgust, surprise, anticipation, trust, and joy. Apurva S [13] asserts that wishes are patterns. Patterns imply expected future fulfilment. We recognise that anticipating the future may have a major impact on a person's behaviour pattern or decision to act. Additionally, the text implies that future prediction is dependent on a subjective assessment that may be illogical and incorrect. Anticipation is a multifaceted feeling that encompasses both pleasure and worry while contemplating or anticipating an upcoming event. Two radically different perspectives on anticipation makes reference to Gurwara [52]. Clearly, the direction in which anticipation moves is determined by our expectations for the near future. It entails hope when good events are anticipated and worry when bad events are anticipated. While there is no consensus on how we sense anticipation, the symptoms of anticipation are best characterised by the feeling we may have had before to taking the stage to deliver a presentation or lecture. We realise that those who take pleasure in good anticipation do not feel compelled to share it with others. On the other hand, negative anticipation puts individuals on edge, and the majority of people share those to seek consolation, which has a greater effect on the people speaking about bad incidents and contributes to the spread of negative incidents more quickly than good incidents. Future expectations are shaped by prior experiences. Individuals who have had terrible experiences in the past are anticipated

to have a higher level of negative anticipation. Anticipation, according to Akhmetzyanova [53], is an inherent characteristic of the mental reflection process of events, activity orientation, and action. Anticipation is the spatialtemporal progression of a condition, as well as the degree of completeness and accuracy of forecast. Surkov and Lomov [54]. According to the authors, the idea of anticipation as an intrinsic characteristic of mind serves three critical roles in the world's reflection: communication, interpersonal interaction, and willingness to follow social standards. Ananyev [55], [56] both highlighted the diversity of anticipatory methods. Anticipation is what shapes and programmes behaviour and activity; it connects decision-making, current control, and communication actions.

Table 7: Anticipation - Literature Review Summary Table

Author / s	Year	Factor	Topic	Remarks
R. Plutchik	2003	Anticipation	Emotions and life: Perspectives from psychology, biology, and evolution	postulated the existence of eight primal emotions
Apurva S	2021	Anticipation	11 main aspects of human behaviour | psychology*	Anticipation impact on a person's behaviour pattern or decision to act
shiwani gurwara	2020	Anticipation	Circle of emotions - anticipation	Is a multifaceted feeling that encompasses both pleasure and worry and is determined by our expectations for the near future
A. I. Akhmetzyanova	2016	Anticipation	The theoretical analysis of the phenomenon of anticipation in psychology	Characteristic of the mental reflection process of events,activity orientation, and action
B. F. Lomov and E. Surkov	1980	Anticipation	On anticipation levels in activity structure	Anticipation is the spatialtemporal progression of a condition, as well as the degree of completeness and accuracy of forecast
B. Ananyev	2008	Anticipation	Problems of age psychology	Idea of anticipation as an intrinsic characteristic of mind serves three critical roles
B. Ananyev	2008	Anticipation	Personality, subject of activity, identity	

Judgement specifically pre-judgment

In Cognitive Psychology, judgement is a component of human behaviour that is dependent on the capacity to make choices or reach a rational conclusion. Generally, judgement should consist of rational conclusions drawn through investigations and analysis of evidence. However, as Apurva S [13] points out, pre-judgment is also founded on certain assumptions, such as innovation. While the judgement is very calculative and significant, judgement without appropriate study and reflection on

the facts based on certain assumptions typically results in the formation of prejudgement. It is possible that pre-judgment motivates an adversarial attitude toward the item. Prejudgment is typically difficult to modify, and influential factors involve thorough preservation include human interaction, mass media consumption, and economic trends.

Table 8: Prejudgment - Literature Review Summary Table

Author / s	Year	Factor	Topic	Remarks
Apurva S	2021	Pre-judgment	11 main aspects of human behaviour | psychology	Pre-judgment alter attitudes and capacity to make choices

Awareness

There are several arguments over the definition of awareness, which encompasses numerous aspects of consciousness and perception. According to yogapedia [57], awareness is defined as the observation and cognitive response to a situation or circumstance by the study of biological psychology. As defined by Natsoulas [58], awareness is "the quality or condition of being aware," consciousness is "being informed, cognizant, conscious, and sensible," and someone is "informed, cognizant, conscious, and sensible." Additionally, it is associated with the state of merely knowing something and with incidental awareness. Sen cites [59] as defining awareness as the capacity to perceive without the use of thoughts, judgements, or interpretations. However, it is natural to express displeasure when an individual with low awareness refers to the author's "Negative Awareness as Low Awareness." According to the research done by Flach [60] and SimplySurvival [61], the author clarifies that situation awareness refers to the adaptive relationship between an actor and his or her environment. According to the author, knowledge of the work domain or work environment, particularly a complicated work environment, has an effect on professional situational awareness. Without addressing the issue, it creates a reason for tension outcomes in order to establish experimental control. Congruence between the subjective perception of an event and objective measurements of the actual occurrence is required by the situation awareness concept. The considerable congruence between the interpretation and the objective circumstance indicates that the interpreter possesses a high level

of situation awareness. A lack of correspondence translates into a lack of situation knowledge. Additionally, the authors think that developing good human-machine systems will establish the agenda for future basic research in human performance and cognition involving context awareness. According to our understanding, acceptance-related awareness may be classified into two categories: awareness of individuals about the vehicle and knowledge of the vehicle's condition reactions to unforeseen events, which can be classified as partially aware or not aware. The author emphasised the importance of awareness serving the finest wit, a correct mentality that begins with honesty and acknowledging the critical truth and doing all possible to resolve it in advance. Biased perspectives on either the positives or only the negatives impair situational awareness.

Table 9: Awareness - Literature Review Summary Table

Author / s	Year	Factor	Topic	Remarks
yogapedia	2018	Awareness	Awareness	defined as the observation and cognitive response to a situation
T. Natsoulas	1992	Awareness	The concept of consciousness: The awareness meaning	Quality or condition of being aware and informed
Sen	2012	Awareness	What is awareness?	define awareness and categories it
J. M. Flach	1996	Awareness	Situation awareness: In search of meaning	clarifies that situation awareness refers to the adaptive relationship between an actor and environment
SimplySurvival	2020	Awareness	Situational awareness { what is it (and why should you care)	

Attitude

According to Allport [62], attitude is defined as "a mental state of readiness organised through experience, exerting a directive and dynamic influence on the individual's response to all objects and situations with which it is associated, and Attitude's shape regarding objects, persons, and values." According to the author, attitude is the most unique and necessary term in social psychology. According to the author, attitude guides one's conduct and activities. According to Apurva S [13], attitudes may be classified as either favourable or positive or unfavourable or negative. We believe that these directions have a key impact in how individuals perceive things and their capacity to comprehend the perspective on them. Attitude sheds light on people's conduct and history, resulting in overt actions. Individuals are typically unable of changing their attitudes unless they are consciously exposed to the training

and procedures. It takes a great deal of discipline to alter it. According to Deeksha S [63], some social psychologists who are more behavioristically oriented refer to attitudes as conforming behaviour. Once established, they exert pressure on the individual to behave in a particular or typical manner. According to Rosnow and Robinson [64], the term attitude refers to an individual's organisation of his feelings, beliefs, and predispositions to conduct. Besides, the report said that attitude has a role in a person's selectiveness. In addition, the author also claimed that no attitude can ever be neutral. It might be favourable or unfavourable, good or negative.

Table 10: Attitude - Literature Review Summary Table

Author / s	Year	Factor	Topic	Remarks
G. W. Allport	1935	Attitude	Attitudes: a handbook of social psychology	Exerting a directive and dynamic in influence on the individual's response to all objects and situations
Apurva S	2021	Attitude	11 main aspects of human behaviour | psychology*	Classify attitudes
D. S	2021	Attitude	Attitude: Meaning, concept and formation | psychology*	Refer to attitudes as conforming behaviour
R. L. Rosnow and E. J. Robinson	1967	Attitude	Primacy-recency	Refers to an individual's organisation of his feelings, beliefs, and predispositions to conduct

External Medium and Channels

Zheng et al [33] demonstrated in their empirical study how travellers' trust and acceptance of self-driving vehicles are influenced by variables impacting AVs such as media effect, self-efficacy, and subjective standards. Additionally, they finally result in a shift in people's trust and conduct. Likewise, the authors mention that both positive and negative reports (what we refer to as mediums and channels) have a significant impact on people's trust; the authors also emphasise in their theoretical foundation study that peer influence is a factor in the changing of social norms, as is people's surroundings and then their responses and reactions. Finkle [65]. According to Fraedrich and Lenz [12] and Poczter and Jankovic [66] studies, respondents and individuals acquire the majority of knowledge on AVs or related issues through the media. According to Anania et al [67], positive information may persuade customers to utilise them. According to Abraham et al [68] and Du et al [8] , the public's willingness to acquire and adopt AVs or self-driving automobiles is low. Schoettle and

Sivak [69] have noted that public acceptability of AVs is inversely related to their amount of automation. We picked a few points or categories that influence people's psychology more broadly in terms of how they absorb information through various channels and media have a big impact on people's psychology and, consequently, on their reaction, response, opinions, and point of view [RROP]. Mediums and channels are the means through which individuals obtain information from the numerous sources accessible to them. We present and classify them as illustrated in Figure 2. The categories are as follows: 1. Social 2. Public Relations. We subdivided the social category into three sub-categories: peer influence (Wikipedia [70], [71] experience (sub-points 1. In Close Proximity, 2. Personal or Past), and bandwagon effect. We classified them into three groups under mass communication. 1. Media (Mass media - Wikipedia [72]) 2. Alternate Media ([71]) 3. Social media platforms. Additionally, we add two subcategories. Mass media and periodicals, as well as alternative media and social media, as we understand them, have the potential to make a big difference (Wikipedia cites [73] as "What is Alternative Media." One last word we used for the study that we found may affect people's reaction and response is what we dubbed " Bandwagon Affect," wherein, as described in the Finkle [65] article, individuals are typically influenced by their peers, specifically from a peer group. For instance, in a hypothetical future situation, if an individual lives among the group of individuals who purchased the AVs, the individual will naturally react favourably toward the product. We feel that in such a circumstance, an individual's ideas, as well as point of view, might greatly influence a person's choice.

Table 11: External Medium and Channels - Literature Review Summary Table

Author / s	Year	Factor	Topic	Remarks
D. Zheng, Q. Luo, and B. W. Ritchie	2021	External Medium and Channels	Afraid to travel after covid-19? selfprotection, coping and resilience against pandemic `travel fear	Trust and acceptance of self-driving vehicles impacting by media effect
C. Finkle	2018	External Medium and Channels	Peer in influence in marketing	Peer influence is a factor in the changing of social norms and individuals are typically influenced by their peers, specically from a peer group
S. L. Poczter and L. M. Jankovic	2014	External Medium and Channels	The google car: driving toward a better future?	Acquire the majority of knowledge on Avs via Media
E. Fraedrich and B. Lenz	2016	External Medium and Channels	Societal and individual acceptance of autonomous driving	
E. C. Anania, S. Rice, N. W.Walters, M. Pierce, S. R. Winter, and M. N. Milner	2018	External Medium and Channels	The effects of positive and negative information on consumers' willingness to ride in a driverless vehicle	Positive information may persuade customers to utilise them
Wikipedia	2021	External Medium and Channels	Alternative media - wikipedia*	Classification of External Medium and Channels
Wikipedia	2013	External Medium and Channels	Peer pressure	
Wikipedia	2021	External Medium and Channels	Alternative media - wikipedia*	
H. Abraham, C. Lee, S. Brady, C. Fitzgerald, B. Mehler, B. Reimer, and J. F. Coughlin	2017	External Medium and Channels	Autonomous vehicles and alternatives to driving: trust, preferences, and effects of age	Public's willingness and public acceptability of AVs towards Avs
H. Du, G. Zhu, and J. Zheng	2021	External Medium and Channels	Why travelers trust and accept self-driving cars: an empirical study	
B. Schoettle and M. Sivak	2014	External Medium and Channels	Public opinion about self-driving vehicles in china, india, japan, the us, the uk, and australia	

Reactions, Response, Opinion and Point of view / Perception [RROP]

In the article React vs. Respond, James [74] cites React vs Respond stats, defining reaction states as an instant influenced by the unconscious mind's beliefs, biases, and prejudices. When we respond, it indicates that an individual's unconscious mind is operating. The author mentioned singular instance in which the reaction is motivated by fear, shame, or guilt. While the terms reaction and response are used interchangeably, they are not identical with what we understood from the preceding reference. The use of terms such as Opinion, Perception, and Point of View is similar to what we saw with response and reaction. According to www.merriam-webster.com, an opinion is just a point of view or judgement regarding a certain issue. Generally, an opinion is seen as a formal declaration and may serve as the last trigger in decision-making. On

the other hand, according to Google's definition and Littlehale's cites [75] and Point of View: Definitions and Examples in Literary Terms [76], perspective develops as a result of one's knowledge and attitude toward anything defined as a point of view. However, despite the fact that they are markedly unlike, we grouped them together for our study since they both originate from someone's narration. As a result, we decided to lump them in with our study. It focuses on the person and his or her decision-making processes, as well as the circumstances that impact them.

Table 12: RROP - Literature Review Summary Table

Author / s	Year	Factor	Topic	Remarks
M. J. Ph.D.	2016	RROP	React vs respond - what's the difference?	Define reaction states as an instant influenced by biases, and prejudices
K. Littlehale	2021	RROP	Point of view vs perspective	Opinion is seen as a formal declaration and may serve as the last trigger in decision-making
literaryterms	2021	RROP	Point of view	

2.1.2 Categorization and Sub-categorization of theoretical comparative estimation table (CET) table

To begin, when we examined our research's theory [77], we gained a better understanding of how our theoretical study should be channelled. Prior to us, part of the issues stemmed from the difficulty of linking terminology, as most research is theoretical. As a result, we place a high focus on recognising the pattern and hierarchy of these terminologies and on defining the flow of each one depending on its significance and effect. Nevertheless, we saw a significant pattern in the assessments of the literature we studied. When pieces are combined, essential links between terms are established; we noticed that they are all connected but not organised or hierarchical, but rather in a pool-like structure 3.1.1. The difficulty we had was incorporating and correlating various terminology, as many are psychological in nature. There is no equivalent metre for psychological elements to be measured in the same manner as weights are.

Thus, we attempt to channel information and distil our understanding in order to construct a CET theoretical concept map and subsequently a subcategorization of the CET table 3.3.2, which we will later utilise as basic criterion for subcategorization classification.We did, however, agree on a data extraction technique that aided in the creation of the CET table's classification and sub-categorization, which we refer to as the Extended CET table. It established the basis for the creation and later application of an expanded CET table. Additionally, the literature review resulted in the development of an expanded CET table and its subsequent usage to collect data. As a result, we selected the following interpretation for the CET table's categorization and sub-categorization. The following table summarises the key highlights from our literature study that were used to create the CET table.

Table 13: Key highlights from literature study [Worry and Risk]

Terminology	Highlights
Worry	1. It is very difficult to quantify worry. 2. Individuals get concerned about particular occurrences when they anticipate a negative outcome or a tendency toward future unpleasant events. 3. We argue that worry may be quantified in terms of distinct possibilities for predicted unpleasant events or outcomes that have already occurred. 4. Quantified in terms of uncertain possibilities for expected negative outcomes.
Risk	1. In comparison to other psychological elements, risk is relatively easy since an individual can readily perceive or quantify danger in terms of low to high, depending on its severity and priority. 2. When dealing with AVs, we choose high risk when individuals are in danger of death, serious injury, or financial loss due to a vehicle. 3. Other minor injuries, financial losses, and degree of reluctance that we may classify as Low to High Risk.

Table 14: Key highlights from literature study [Anxiety and Trust]

Terminology	Highlights
Anxiety	1. We chose Anxiety distinctly because, since it is sometimes used interchangeably with worry as a component of fear, Anxiety is about something inescapable 2. If an individual suffers from anxiety over anything or certain things, we cannot prevent it, but we may conquer it with information or via persuasion in the case of concern. 3. We believe in quantifying anxiety; we categorised it as minor or severe Anxiety. 4. Minor anxiety causes people to anxious, however there is a slim chance that they will overcome their anxiety. 5. However, in the case of severe anxiety, it is difficult to convince people or to instil confidence or assurance in them about a certain subject, particularly when it comes to safety-related concerns.
Trust	1. Trust is a global idea, and individuals quickly discriminate between trust and distrust, trust is more vocal. 2. While neutrality is a possibility, we engage with trust and distrust in order to obtain binary responses. 3. Our evaluation is based on predictability, dependability or reliability and faith, as well as AV management and communication that meets user expectations 4. The user's capacity to infer an AV's behaviour in the absence of observation and evidence to support judgement.

Table 15: Key highlights from literature study [Attitude and Prejudge]

Terminology	Highlights
Attitude	1. Expectation is contingent upon people's preparedness for particular events. 2. If individuals are willing to accomplish something or, in our instance, demonstrate readiness, we may classify it as a positive attitude; otherwise, it is a negative attitude.
Prejudge	1. People form preconceived notions about particular things based on specific assumptions. 2. People view or see something without prior or complete understanding and they frequently make several assumptions. 3. According to our analysis of literature reviews, prejudgement classified into two components: low magnitude assumptions and large magnitude assumptions.

Table 16: Key highlights from literature study [Anticipation and Awareness]

Terminology	Highlights
Anticipation	1. As indicated in our research analysis, anticipation is typically motivated by a sense of comfort in light of future occurrences. 2. Anticipation is classified as either positive or negative depending on the level of trust, anxiety, minor worry - certain possibilities of bad outcomes, worry - Uncertain possibilities of negative outcomes. 3. Also on ease or uncertainty regarding future expectations based on past events or experiences, as well as the degree of completeness and correctness of AV forecasts.
Awareness	1. We define awareness in terms of people's knowledge or awareness of AVs and the degree of transparency with which that information or awareness is communicated to the consumer or driver. 2. Throughout our research, we found that a vehicle's situational response to unforeseen conditions is inextricably linked to users' significant demand for supervision, which is not entirely within human awareness as per concept of autonomous vehicles are concerned. However, we observed the presence of a human driver is required. 3. We classified our study's awareness into two categories: Low and High Awareness

2.2 Mass Communication

According to the literature review, we picked mass communication, which comprises explicit feeds, reports, and articles produced by competent individuals or authors presumably knowledgeable in their subject. We intend to create principles for establishing a categorization of subcategories for the expanded CET table and then applying them to the study's data acquisition, modelling, and visualisation analysis. The study's references reflect the authors' viewpoints and are collected from apparently well educated persons with significant expertise. Due to the pandemic and lockdown, which prevented us from field study, we also encountered another dilemma in which we had reason to question the authenticity or reliability of online individual response gathering techniques due to occurrences of circumstances people were going through. Nonetheless, we settled at a solution in which we believe all references collection essentially represents; in short, they indicate a social representation of a social picture owing to the references' nature. The Articles, Feeds, and Reports sources were primarily chosen to illustrate our following knowledge of articles, reports, and feeds we comprehend from literature we studied .

Articles: They are works of fiction aimed at a large audience. The primary goal of writing an article is to transform society. It might be the writer's personal interests, or it could be a reference to current events. The facts and information presented in this article are generally objective, as the writer's purpose is to discuss the subject rather than persuade the reader to embrace his opinions. Articles are intended to describe a subject via the use of direct declarations and statements [Pediaa[78]], [Toppr[79]], [N.S[80]] and [Sarikas[81]].

Feeds: Users are alerted of content changes via feeds. They provide summaries of the articles in the web feed rather than the full text. Numerous news sites, weblogs, educational institutions, and podcasters provide web feeds. A data feed's principal objective is to aid consumers in discovering their products. A accurate data flow that adheres to the channel's specifications is critical. However, feeds may include a journal or blog, a specific topic, or the authors' or writers' points of view. The content of the feeds is accessible in a variety of formats, including news, RSS, and online blogs [techopedia[82]], [PERALTY[83]] and [datafeedwatch[84]].

Reports: Brief and short, communicate the information to someone who want to use it: remarks describing what occurred in the past. The circumstance or issue is fully stated. The explanation is observational and analytic in nature. A report is a formal document that employs data, charts, and graphs to describe a subject and to substantiate its arguments and conclusions. The two most common forms of report writing are news reports and academic reports. Report writing is distinct from other forms of writing in that it presents only facts, not the author's opinion or judgement. [Staff Writer reference.com[85]], [accountlearning[86]], and [harappa. Education[87]].

2.3 Summary

We compiled our literature review at the end to help us organize our reading and thoughts. The compilation of the literature review reflects our intended route of organizing our thoughts and some research gaps, or missing links, that we identified and decided to address further in our study. Finally, our study's contribution to the thesis is a succession in attempting to organize and connect thoughts in order to create a coordinated pattern of context, bridging gaps and missing links while keeping the thesis objectives in mind. At the outset, the intended route for the literature review was as follows, keeping the thesis objective in mind.

1. Understand human psychology to human behaviour, which introduces to anything an individual does.

2. Understand psychological aspects and elements.

3. Understand influential mediums or channels to understand how people receive information.

4. Understand the interlink of the points mentioned above.

5. Extraction and incorporation of pertinent psychological aspects, elements, and attributes from the literature study to better understand and link to the objectives.

After we crossed through the intended route for the literature we reviewed, we observed gaps and missing links, which we then endeavoured to address throughout the thesis contribution. Those are as follows.

1. Because the psychological aspects and elements used were nebulous while interlink, simplification was felt to be necessary in order to meet the thesis objectives.

2. Despite the fact that psychological aspects and elements have strong interconnections, they were not channelled to our objectives.

3. The inadequacy of streamlining the interdependence between human psychological elements and how people receive information through various mediums and channels struck me as deficient.

4. The structure observed was a pool-like structure, as explained in 3.1.1, with no simplified hierarchical pattern or defining overall flow between psychological aspects and elements to external mediums and channels to address the thesis objectives.

5. Psychological factors, when examined independently, are connected, but there is no immediate association to the APW challenges associated with autonomous vehicles, as stated in the thesis objectives.

6. When all terminologies are combined to address the thesis objectives further, the literature review falls short of a binary standpoint.

7. Notably, not ample skeptical analysis was observed in the literature we reviewed on psychological aspects which we focus at of AVs to gain a better understanding of people and to alleviate psychological roadblocks' classification that prevent them from accepting AVs. The majority of pertinent literature emphasised the positive aspects.

Chapter 3

Methodology, Contribution, Findings and Discussion

It was deemed desirable to utilise a combination of approaches to evaluate literature selectively in order to maintain a strong emphasis on the study goals through the utilisation of collected sources. Due to the nature of the study, which includes a variety of objects and topics that must be addressed, it was deemed beneficial to employ the approach which we believe possible, to carefully evaluate literature in order to maintain our focus on primary research objectives using literature data.

3.1 Method

We began by doing literature searches on "Google Scholar" using particular keywords related to our aims. To conduct a literature study, we first search Google Scholar using terms such as acceptance, attitude, autonomous vehicles, difficulties of AVs, and human concerns, all of which have interrelated terminologies. It was followed by additional resources accessible on the internet based on the points we saw in the examined references that were conducive to our aims in order to broaden our search. After reviewing the literature, we synthesise the theoretical comparative estimation table (CET); components gleaned from the research are incorporated into the CET table with the goal of creating binary standpoints and a hierarchical idea map for the CET. We conducted literature searches with specific goals in mind. Thus, the objectives were to identify fundamental points upon which we could build arguments

or cases in order to develop a classification of sub-categories for the CET table, to identify cases upon which we could differentiate viewpoints and classify them with the least amount of ambiguity possible between their descriptions in order to form the extended CET table. Additionally, we assess them using the perspectives that we used to value the expanded CET table.

After completing the expanded CET table, we used or browsed accessible search engines for Reports, Feeds, and Articles with keywords such as acceptance, attitude, autonomous vehicles, obstacles of AVs, and human concerns with their interrelated terminology on Google to expand our search. After carefully reading and analysing the references, which totaled seventy-four, we highlighted points with our best interpretation and assigned them to the appropriate classification or sub-categorization inside the excel sheet table. Additionally, we do data acquisition, modelling, and visualisation analysis on the data in order to present our findings using the Power-BI ((Business Intelligence)) tool.

3.1.1 Pool Concept Map

The figure [1] depicts a large pool of research data that we reviewed and came across that touches on psychological aspects. It contains over 20 terminologies ranging from Morality, fear, people's desire and willingness, trust responses, and reactions to anxiety, as well as opinions, Ethical and Social Dilemma. To begin our investigation, we understood the relevance of emotions and their relationship to psychology and decision-making. Thus, we choose to study these terminologies, however we see the need of streamlining 20+ complex terminologies. As a result of the study's nature, we limit ourselves to only eight selected terminologies as stated in the literature review 2, which our study demonstrates ahead of in terms of developing a theoretical CET Concept map and table.

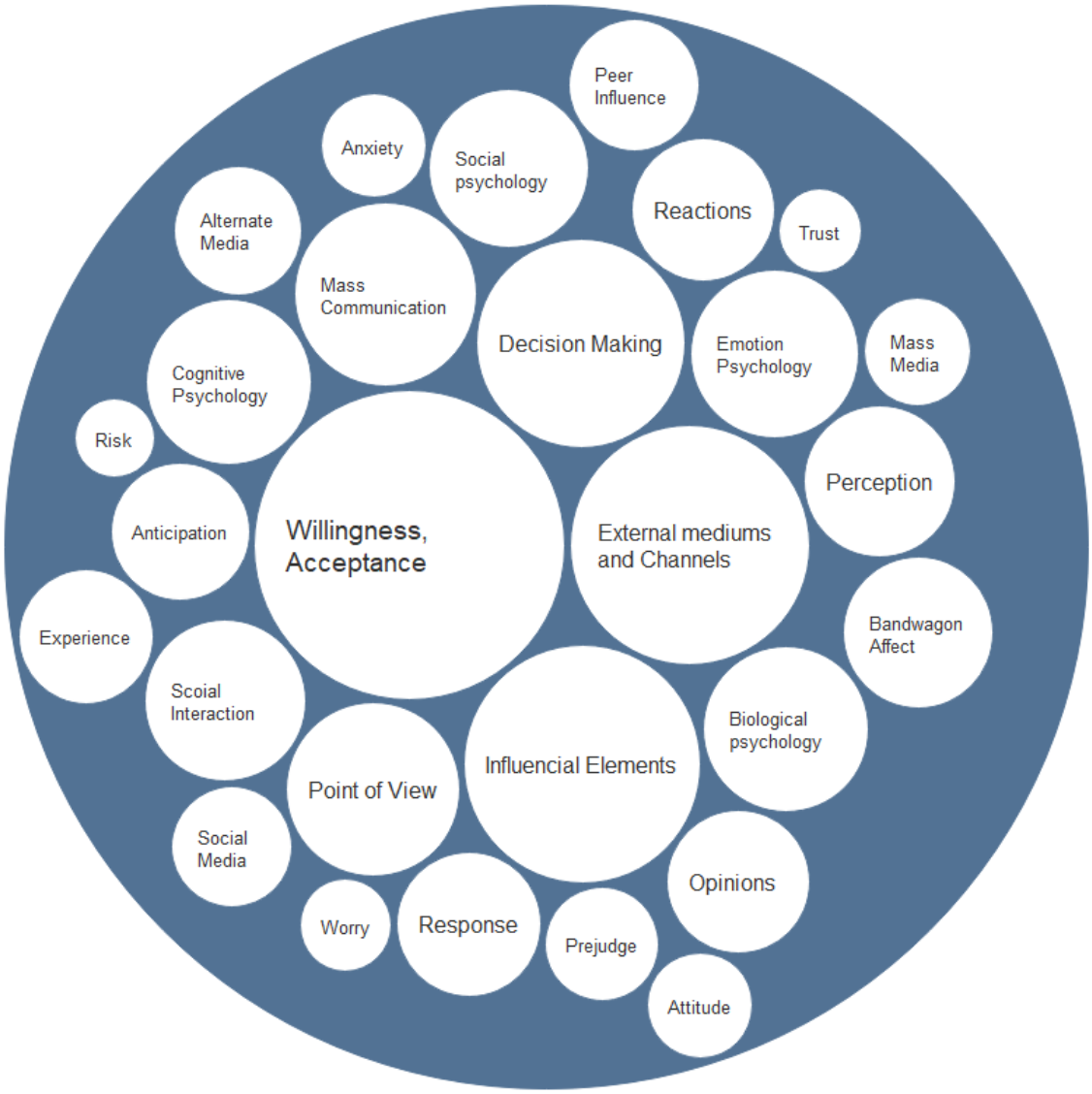

Figure 1: Pool Concept Map

3.1.2 Selection Criteria for Psychological aspects and (Influential) Mediums and Channels

The following points summarises our selection criteria for psychological aspects and media or channels through which we created and presented the CET table and CET Hierarchical concept map of data flow from the literature research.

Psychological aspects

1. Signify a state of being.
2. Universally communicated by all high intellectual living creatures.
3. Unavoidable
4. Stirred up psychological reaction, response, opinion and Perception or point of view [RROP] aspects.
5. Based on intensity
6. Adverse aspects may commence non-participation and non-interest of an individual.
7. Not easy for an individual to control them and needs a lot of discipline and emotional control.

(Influential) Mediums and Channels

1. Types of resources from where people receive the information.
2. How people receive information through either from visually, context interpretation , surroundings or within proximity.

3.2 Data Acquisition, Modeling and Visualization Analysis

We have done specified steps of analysis to provide results. We chose a random sample of seventy-four references [A.1] based on the study goals using a secondary data collecting approach. We manually examine the selected references and ascertain the context and psychological views of the authors, then analyse the perspectives, mark and classify them according to sub-categories for ease of comprehension, and organise

the data in excel. Additionally, we utilised a data visualisation tool (PowerBI - Business Intelligence) to obtain results and customised annotations to alter the expanded CET table data in order to produce diagrams that helped us better comprehend our findings.

According to a review of the seventy-four references, they were obtained from thirty eight articles, thirty-four feeds, and two reports on AVs [A.2] and also keeping sentiment imbalance in mind. For our investigation, we randomly chose the sources, keeping our research objectives in mind.

Data Acquisition: The data was formatted in such a way that it was suitable for use in Power BI. The Categories were transformed into discrete parameters in order to facilitate the definition of the explanatory and physiological aspects associated with them.

Modelling: A master table was constructed for the categories, subcategories, subcategory categorization, and higher category. To prevent running out of space in the graphics, abbreviations/annotations were utilised to describe the factor description, resulting in the creation of the master code file for the Categories and subcategories. A calendar table was established with manual coding to provide date- time relationship links between all the files. Finally, all tables were connected together in Power Bi using relationships to create the Main Data File, which contained all the parameters captured in the data.

Visualization: Numerous graphs are utilised to make observations based on the data's facts and statistics. Stacked bar graphs, clustered bar graphs, doughnut charts, and metrics few of the graphs that were all employed.

3.3 Contribution

3.3.1 CET Hierarchical Concept Map [2]

It is a representation of the CET Hierarchical concept map extracted from the literature study after simplifying the psychological components and their influencing

media or channels. The arrow indicates the direction of information flow from the bottom to the top. How individuals get information, whether contextually, visually, in their surrounds, or in close proximity, and the kind of resources from which they obtain information. It contains our extracted thoughts on the content analysis of literature that we conducted using the Hawking Publication Timeline idea map template included with the Free Edraw Mindmaster software edition. The timeline style was chosen to communicate our knowledge of how information flows and flow of circulation from bottom to top. From the bottom up, people absorb information and then process it internally, affecting their RROP. We define once established as the culmination of an individual's cycle of information collecting via the aforementioned channels or media and influencing variables and making their decision indicating their willingness and acceptance of AVs.

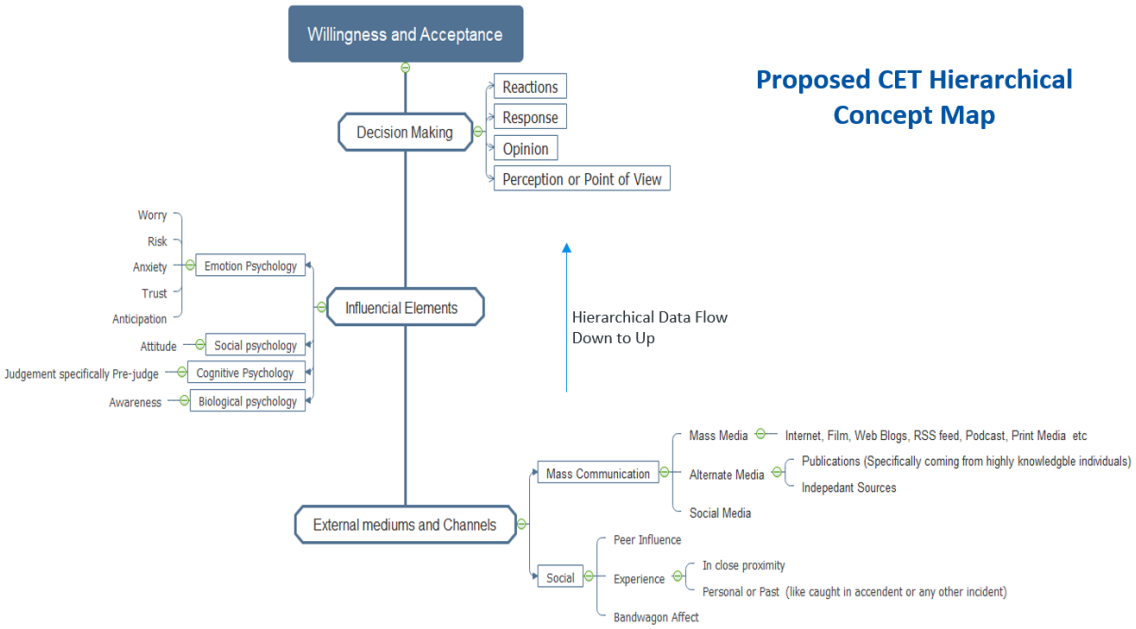

Figure 2: Proposed CET Hierarchical Concept Map

3.3.2 Theoretical Comparative Estimation Table (CET) [3]

To build the theoretical model table for this study, we analysed secondary data material from the literature in order to extract or create both a CET Hierarchical Concept Map and a CET Table using secondary data while keeping the research objectives in mind. This table has picked eight psychological characteristics that we believe are more straightforward and universal in nature in order to find 20+ compounded terminologies based on our content analysis selection criteria and the reasons author Apurva S [13] mentioned for generating binary standpoints. We concluded that there is no appropriate metric for measuring psychological terminology in the same way that we do for weights after evaluating primarily two scaling techniques proposed by Ankur Joshi et al [88] and Joseph Bonneau et al [89]. Nonetheless, we opted for a tabular organisation of the terminology and extracted data, as seen in Figure 3A and 3B [3] , in order to offer near to binary responses.

Fig 3A – CET Table

References to Study	Psychology															
	Emotion										Social		Cognitive		Biological	
	Fear															
	Worry		**Risk**		**Anxiety**		**Trust**		**Anticipation**		**Attitude**		***Prejudge***		***Awareness***	
	Certain possibilities of negative results	Uncertain possibilities of negative results	Low	High	Minor	Severe	Trust	Distrust	Positive	Negative	Low Readiness	High Readiness	Low magnitude assumptions	High magnitude assumptions	*Low*	*High*

Fig 3B – CET Table

References to Study	Mediums or Channels						
	Mass Communication			Social Interaction			
						Bandwagon Affect	
	Mass Media	Alternate Media	Social Media	Peer Influence	Personal or Past Experiences	Trending	Non-Trending

Figure 3: Theoretical Comparative Estimation Table (CET)

3.3.3 The extended CET table [4]

To develop the extended theoretical CET model table for this study, we analysed the information content of the literature reviewed in our earlier study in order to identify sub-categories while taking research objectives into consideration in an inclusive manner, resulting in binary views. For this table, we extracted psychological classifications of sub-categories that we believe are more easily distinguishable and universally applicable for the eight terminologies and sixteen sub-categories we created for the CET table [77], based on our content analysis of the literature and with the goal of generating binary standpoints. These classifications of sub-categories are based on our examination of the literature and observations of instances, and they are as follows.

References to Study	Psychology															
	Emotion										Social		Cognitive		Biological	
	Fear															
	Worry		Risk		Anxiety		Trust		Anticipation		Attitude		Prejudge		Awareness	
	Certain possibilities of negative results	Uncertain possibilities of negative results	Low	High	Minor	Severe	Trust	Distrust	Positive	Negative	Low Readiness	High Readiness	Low magnitude assumptions	High magnitude assumptions	Low	High
	1.Predictive Outcome	1.Unpredictive outcome	1.Physical Risk - (Minor Injury)	1.Physical Risk (substantial Injury) -Death, or potential death	1.Marginally convince or confidence over safety issues	1.Minimum or no confidence or convince over safety issues	1.AV handles and communicates as per user's expectations	1.AV does not handles and communicates as per user's expectations	1.Trust	1.Anxiety-Severe, Anxiety-Minor, Worry - Certain possibilities of negative results, Worry - Uncertain possibilities of negative results	1.mental state of Readiness- Unfavorable user's behavior and actions and his response	1.mental state of Readiness - Favorable user's behavior and actions and his response	1.Infirm statement based on assumptions without strong proof of data and analysis	1. Strong statement based on assumptions without strong proof of data and analysis	1.1. Not aware 2. Partially Aware	1.Fully Aware
	2.Inclination towards future predictive outcome based on adverse event/s	2.Inclination towards future unpredictive outcome based on adverse event/s	2. 1.Equipment Loss 2.Financial Loss		2.nervousness		2. User guess on AV's - 1. Precdictability 2. Dependability 3. Reliability	2.User does not guess on AV's - 1. Precdictability 2. Dependability 3. Reliability	2.Ease over future expectations based on past events or experiences	2.Unease over future expectations based on past events or experiences	2.Unfavorable selectiveness	2.Favorable selectiveness			2.Transparency of Information provided (None or hyped or false promises)	2.Provided high Transparency of AV's Information
			3.Dissatisfaction and Hesitation				3.User's ability to estimate AV's behaviour - 1. must be observable 2. Evidence is needed to hold evaluation	3.User's ability to estimate AV's behaviour - 1. no observation 2. No Evidence to hold evaluation	3.High degree of completeness and accuracy of predictions about Avs	3.Low degree of completeness and accuracy of predictions about AVs					3.Vehicles Situational repsonse to unpredictable circumstances with user's considerable need for supervision	3.Vehicles Situational repsonse to unpredictable circumstances with user's minimum to no need for supervision

Figure 4: Extended CET Table

Classifications of Sub-Categorizations

1. **Worry [Certain possibilities of negative results and Uncertain possibilities of negative results]**
   (a) Outcome of uncertain possibilities of negative or unfavourable results.
   (b) Outcome of possibilities of negative or unfavourable results.
   (c) Future possibilities of results based on Inclination towards adverse events / already occurred events.
2. **Risk [Low and High]**
   (a) Include potential death or substantial losses.
   (b) It includes varieties of risks such as Equipment Risk (Equipment Break Down) 2. Financial Risk (Value for money) 3. Physical Risk (Injury or sickness).
   (c) Satisfaction and hesitation [Based on risk context]
3. **Anxiety [Minor and Severe]**
   (a) Anxious over safety issues in relation with less confidence and less convincing towards things.
   (b) Nervousness which is unavoidable [Sometimes it is unreasonable due to lack of knowledge and not understanding how particular thing work or going to work].
4. **[Trust and Distrust]**
   (a) People expectations with a machine (AVs), handling the responsibilities to communicate with certain situations under specific scenarios.
   (b) Upon Scenarios under certain situations how machine (AVs) behaves and can users guess its - 1. Predictability 2. Dependability 3. Reliability
   (c) Ability to estimate machine's (AVs) behaviour - 1. It must be observable 2. Evidence is needed to hold evaluation.

5. **Anticipation [Positive and Negative]**

   (a) It includes combination of anxiety, worry and subjective judgment.

   (b) Person's behaviour and decision to act waiting for anticipated or past events.

   (c) Comfort with Future expectations based on past events or experiences.

   (d) Degree of completeness and accuracy of predictions about AVs

6. **Attitude [Low Readiness and High Readiness]**

   (a) People's Functional or mental state of readiness.

   (b) favourable or unfavourable selectiveness of readiness [because attitude never be neutral] - Favourable meaning to the advantage of someone or something or expressing approval as per Dictionary definition and By thefreedictionary, Selectiveness is defined as the ability to distinguish, especially to recognize small differences or draw fine distinctions: Empowered or tending to select. For example, It describes a specific situation in the past when you chose your attitude or it describes the specific things you did to choose your attitude in that situation and then translate it into action.

   (c) Future possibilities of results based on Inclination towards adverse events / already occurred events.

7. **Prejudge [Low magnitude assumptions and High magnitude assumptions]**

   (a) Based on certain assumptions; strong/weak statement based on see and observe things without knowledge and influential mediums such as personal speeches, political and economic development etc. based on strong sense of optimism, beliefs etc.

   (b) High Magnitude assumptions: (Less data or not sufficient data but strong statements).

   (c) Low magnitude assumptions: (Less Data or Not sufficient data and not so strong Statements).

   (d) (Context based - High or low - Strong statement of hope and positive enthusiasm without strong proof of data and analysis)

8. **Awareness [Low and High]**

   (a) People's knowledge about AVs 1. Not aware 2. Fully Aware 3. Partially Aware.

   (b) Transparency of Information provided None or hyped or false promises.

   (c) Vehicles Situational response to unpredictable circumstances and people's need for supervision for AVs 1. High 2. Low

3.4 Findings

To begin, we like to convey our results graphically, which is why we have chosen to exhibit our findings aesthetically using charts, diagrams, and tables. Keeping this in mind, we addressed class imbalance in the sentiment subcategory by maintaining a balanced distribution of Feeds, Articles, and Reports. When we examined two different sorts of sources, Articles and Feeds, we discovered some noteworthy observations, which we have described here. We picked them for comparison because feeds, by the criteria outlined above, are an opinionated source. On the other hand, articles are typically seen as objective in nature, rather than attempting to convince the reader to embrace the author's beliefs.

The doughnut chart (Count of Sources by its types [5]) counted by Types separated our references or sources by type, since our study included thirty-eight articles, thirty-four feeds, and two reports. Additionally, we classified all seventy-four references by doing sentiment analysis on based on their headlines and then conducted context interpretation. We also evaluated source imbalance in order to display data that is symmetrical in nature. As seen in the doughnut chart (Count of Sources by Sentiment [6]), we have thirty-five references with positive and negative sentiments and four with neutral sentiments.

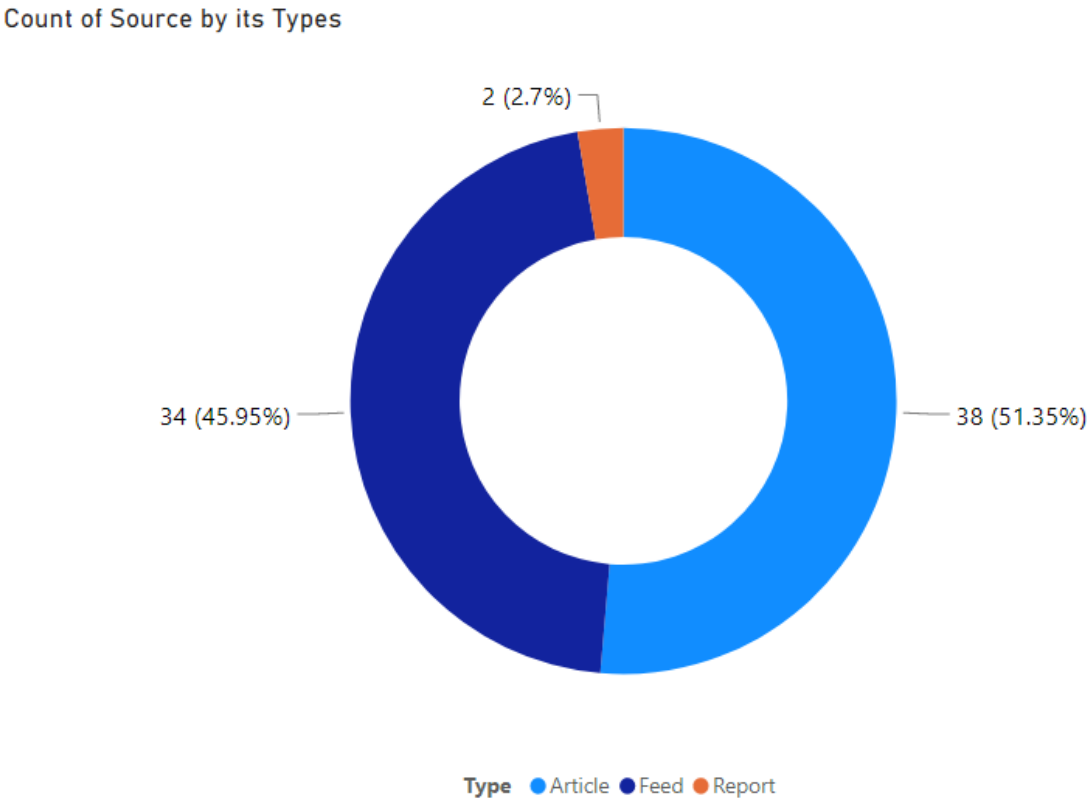

Figure 5: Count of Sources by its types

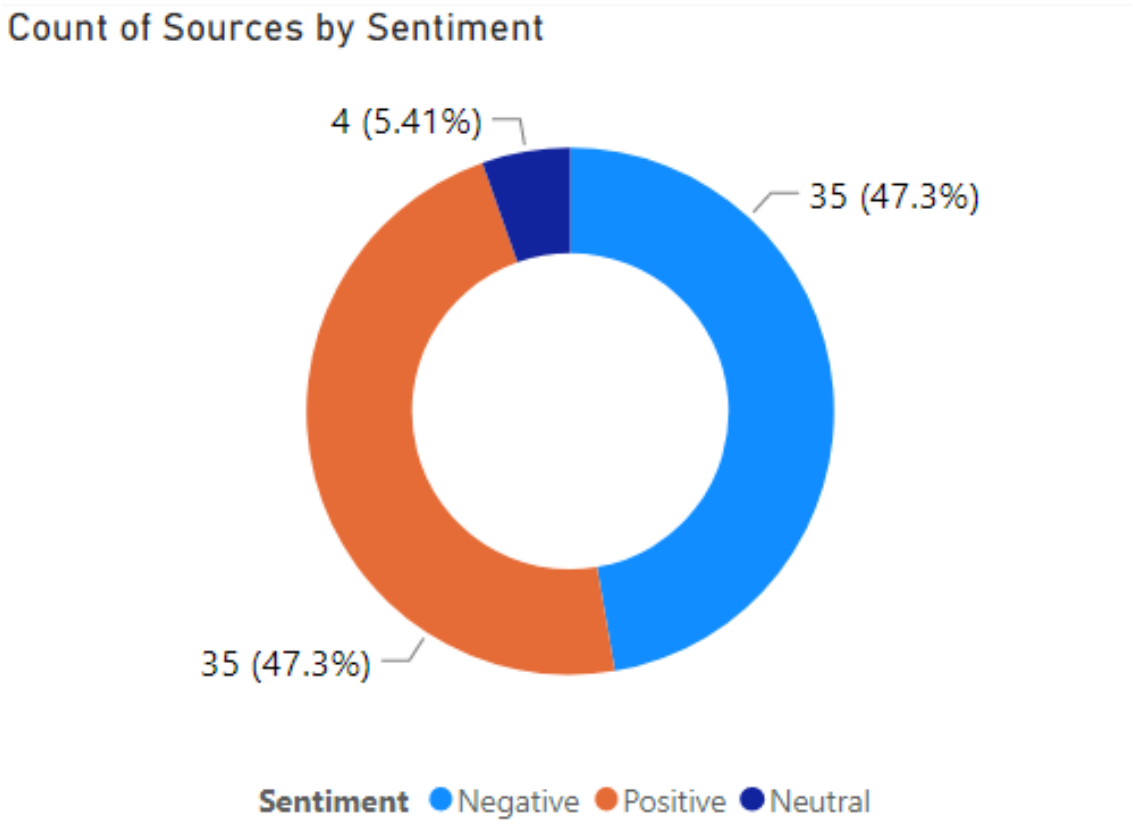

Figure 6: Count of Sources by Sentiment

The clustered bar chart of a category overview (Categories Overview [7]) that we provide here illustrates our findings on the incidence of categories in a total of seventy-four references that we examined. The clustered bar chart of a subcategory overview (Sub-categories Overview [8]) illustrates the incidence of subcategories in our research of the references we chose. It is noted that the graphs mentioned above are dominated by those who lack awareness of the complete aspect of AVs, followed by Anticipation, Anxiety, and Worry. The majority of people's perceptions of autonomous cars are biased toward them being a big risk, i.e., powerful enough to cause bodily damage, necessitating extreme caution and continual supervision even when the process is automated. The public is fully aware that autonomous systems are susceptible to unforeseeable and unknown circumstances for which the system was not built, resulting in inconsistent caution and reliability.

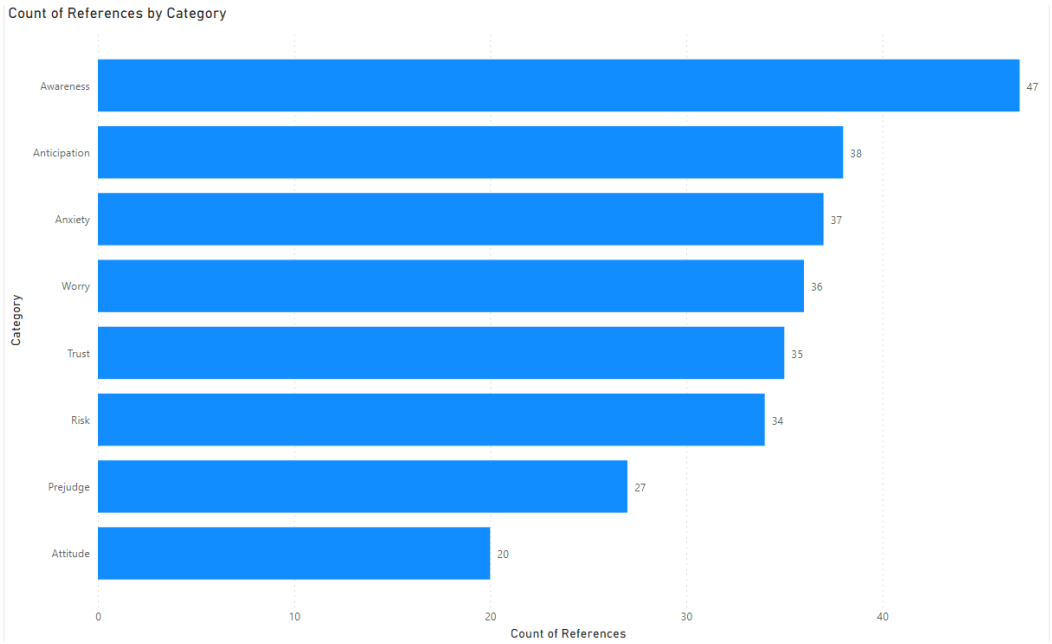

Figure 7: Categories Overview

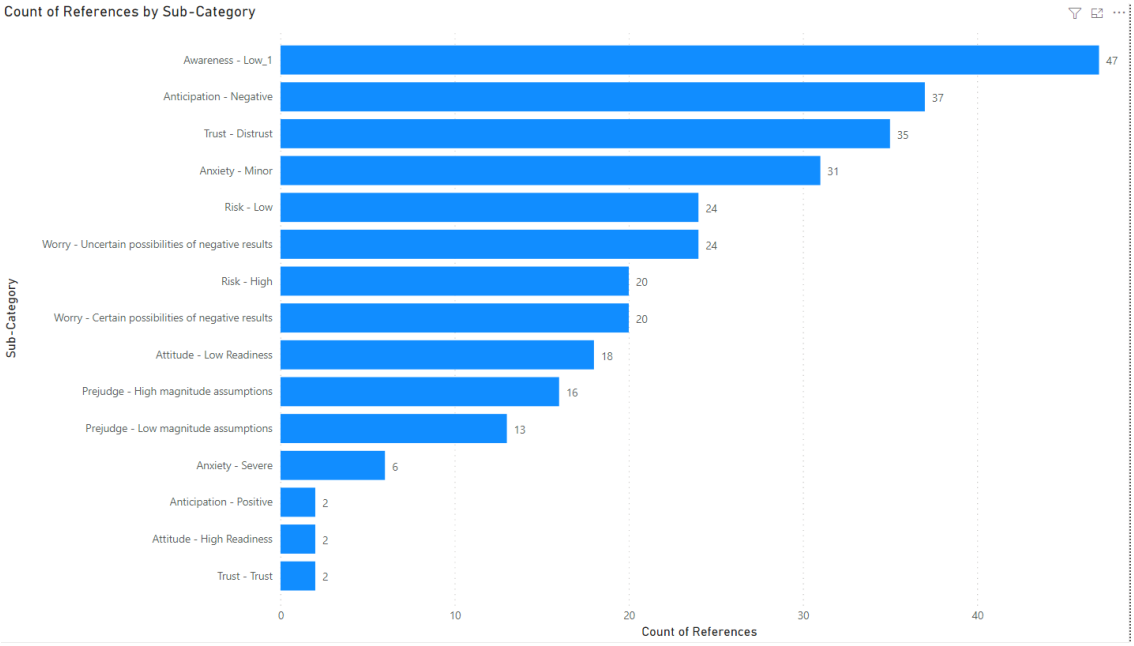

Figure 8: Subcategories Overview

The stacked bar chart diagram below illustrates the (Count of References by year and sentiment [9]) count of references by year and sentiment analysis from 2015 to 2021, despite the fact that we chose the references at random without regard for the year.

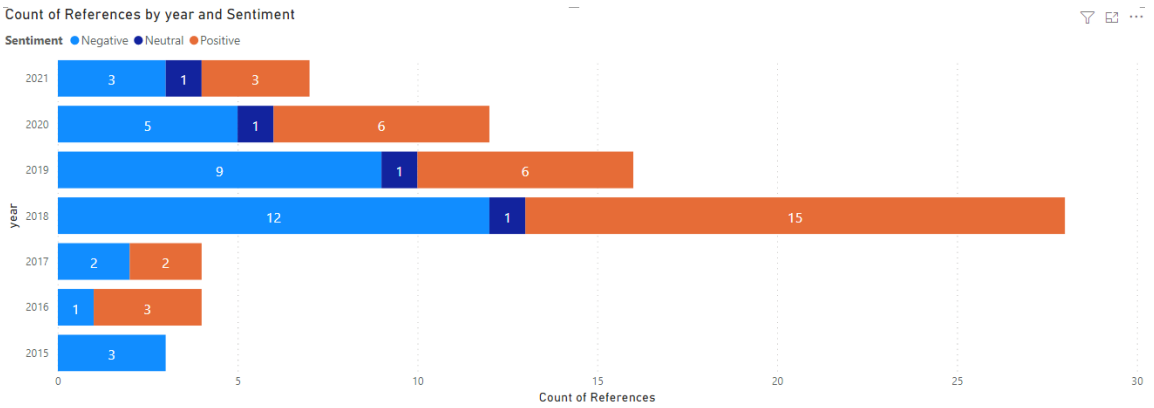

Figure 9: Count of References by year and Sentiment

Nevertheless, we noticed the trend we intended to portray, particularly when coupled with positive and negative sentiment analyses. During the study of Progressive Sentiment Year-by-Year data [10], we discovered that in 2015, individuals were concerned about awareness and risk, demonstrating that people's reactions to AVs are unpredictable despite just having positive dialogues and information.The fascination of people towards AVs and their wonderful future scope was perfected by uneven and "not giving the full picture" marketing, which attracted huge amounts of funds to be implemented in order to produce a working model for the AV, the major factor was Anticipation, which dissolved in Awareness and Worry since the true face behind the development of AVs was revealed.

Year	Positive Sentimenets	Neutral Sentimenets	Negative Sentiments	Dominant Factors	Dominating Concerns
2015	14	0	0	Awareness , Risk	Vehicles Situational repsonse to unpredictable circumstances with user's considerable need for supervision , Equipment or Financial Loss
2016	7	0	5	Anticipation	Low degree of completeness and accuracy of predictions about AVs
2017	7	0	8	Awareness , Worry	Vehicles Situational repsonse to unpredictable circumstances with user's considerable need for supervision , Worry of negative future predictive outcome based on adverse event\s
2018	49	7	48	Risk , Worry	Physical Risk (substantial Injury) - Death, or potential death ; Worry of negative unpredictive outcome
2019	43	2	11	Awareness	Transparency of Information provided (None or hyped or false promises)
2020	34	8	16	Worry	Worry of negative unpredictive outcome
2021	16	8	14	Anxiety	Marginal confidence or convenience & Nervousness

Figure 10: Progressive Sentiment Year-by-Year data

Our data, which focuses on the skeptical side of things, shows that from 2018 to 2020, risk, worry, and lack of understanding about the actual situation were the most prevalent variables. Physical Risk/Potential Death from Accidents, Unforeseen Situational Response from the AVs, glitches, and Unpredictable Outcomes were among the primary issues found and observed under the analysis. In comparison, data from 2021 suggests that anxiety is spreading throughout the community, leading in apprehension over adoption, convenience suitability, and a not ample of faith in AVs as a product due to their tricky and not ample of unscrupulous over the ease of use.

Given that our study, we focused on the pragmatic and challenging side of psychological elements relating to people's inclination toward autonomous vehicles, our following doughnut chart (Early Bird view of Data sub-categorization of CET Table [11]), renamed the bird view doughnut chart, provides us with an overview of categorization.

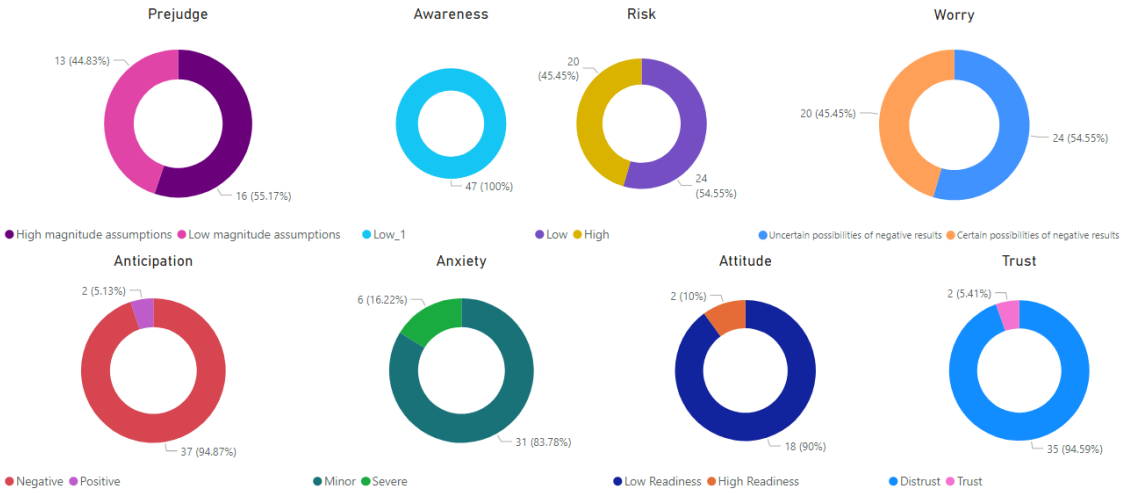

Figure 11: Early Bird view of Data sub-categorization of CET Table

Below, here we have implemented the element of sentiment being positive, negative. The doughnut chart (Bird View of Positive and Negative Sentiment Analysis [12]) shows the results. The graphic provides a bird's eye perspective of the positive and negative sentiment analysis we did on the extended CET table classification and sub-categorization, with the results as displayed in the figure. We eliminate neutral sentiment from the bird's eye view of positive and negative sentiment analysis to produce source imbalance for more reliable statistical result data.

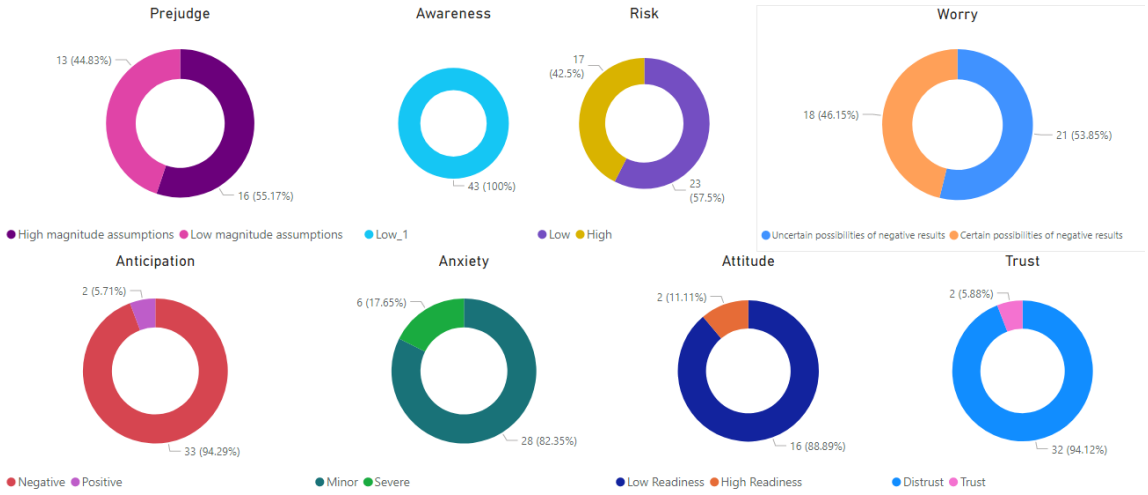

Figure 12: Bird View of Positive and Negative Sentiment Analysis

For further analysis, we considered mining deeper to extract insights from individual diagrams as positive and negative sentiments and studying them separately, as shown in diagrams [Bird View of Positive Sentiment Analysis[13] and Bird View of Negative Sentiment Analysis [14]. The following is the analysis, in negative sentiment, we see a lack of trust, absolute anxiety, worry, and negative anticipation, as expected. When Positive Sources were investigated, it was discovered that they took a cautious approach since they had demonstrated faith in the systems but had expected total transparency of data about product information and unease anticipation of a low degree of completeness regarding AVs. Premature products are thought to form an opinion based on a mix of anxiety and worry.

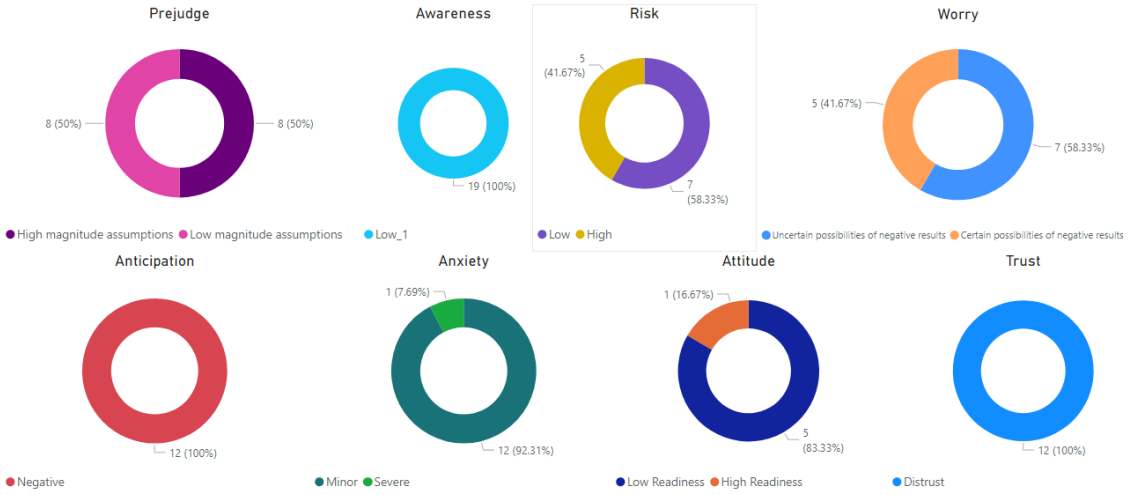

Figure 13: Bird View of Positive Sentiment Analysis

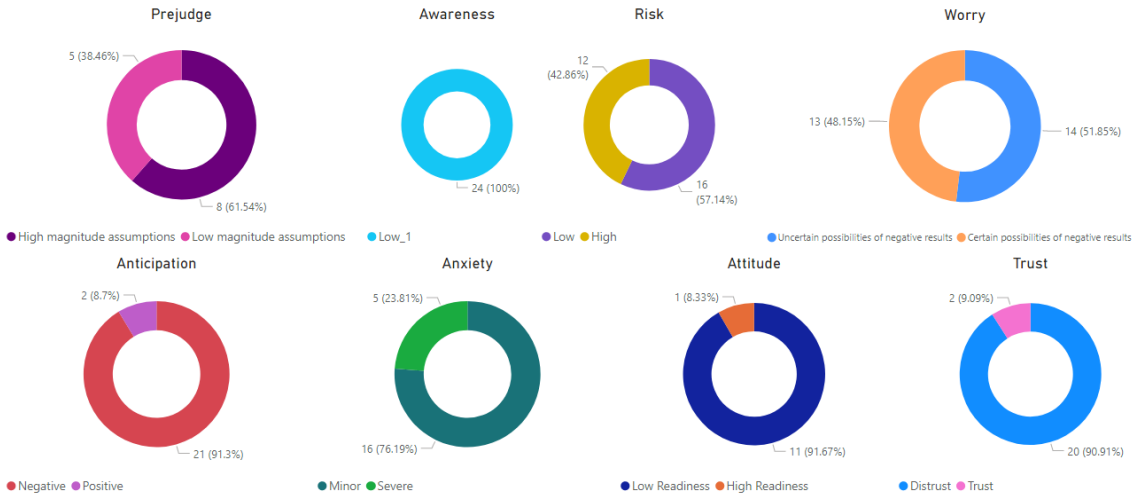

Figure 14: Bird View of Negative Sentiment Analysis

We performed data analysis on the extended CET table in the following table, and out of a total of 45 classifications of sub-categories we analysed, we presented here the top 20 classifications of sub-categories of occurrence we observed, as shown in table (Classification of Subcategorization (Top 20)[15]) People are concerned that autonomous systems are susceptible to unforeseen and unlikely circumstances for which the vehicle is not built, implying that more attention and reliability is required. The majority of individuals believe

autonomous cars constitute a risk, one that is significant enough to cause physical harm, necessitating extreme caution and continual supervision, despite the fact that the procedure is pre-programmed. The most visible category among all of our resources is Awareness, and it has been noticed that transparency in reference sources plays an important role in developing Awareness, since sources may build a lot of hype or make misleading claims about the autonomous system. It may provide perplexing situations that influence the thinking process of the general public, which corresponds with negative anticipation coming from anxiety about the product being fully proof and worry if no or insufficient evidence is shown. Overall, predictability, dependability, and reliability are all linked to distrust.

Classification of Subcategorization	References
Physical Risk (substantial Injury) - Death, or potential death	20
Vehicles Situational response to unpredictable circumstances with user's considerable need for supervision	20
Worry of negative unpredictive outcome	19
Strong statement based on assumptions without strong proof of data and analysis	16
AV doesn't handle and communicate as per user's expectations	14
Marginal confidence or convenience & Nervousness	14
Worry of negative future predictive outcome based on adverse event\s	14
Dissatisfaction and Hesitation	13
Infirm statement based on assumptions without strong proof of data and analysis	13
Transparency of Information provided (None or hyped or false promises)	12
Combination of Anxiety and Worry	9
Combination of Anxiety and Worry & Low degree of completeness and accuracy of predictions about AVs	9
Nervousness over safety Issues	9
Marginally convince or confident over safety issues	8
User's ability to estimate AV's no observable behaviour with no evidence to hold evaluation	8
Low degree of completeness and accuracy of predictions about AVs	7
Mental State of Readiness- Unfavorable user's behaviour and actions and his response & Unfavorable selectiveness	7
Combination of total Negative Anticipation based on the classification	6

Figure 15: Classification of Subcategorization (Top 20)

In the classification of sub-categories, we discovered a preponderance of people fearing physical injury, substantial death, or potential death, and the data revealed significant concern about the vehicle's situational response to unpredictable circumstances, as well as the need for user supervision, which contradicts the idea of an autonomous vehicle we have been imagining or hearing

about. Several firms working on the development of AVs were cited as providing passion and trust in the management and communication of AVs with the surrounding environment. However, based on published data or evidence we studied, this does not appear to be the case, since people continue to be concerned about AVs' inefficiency, which might result in a poor consequence or future predictions of unfavourable results based on past occurrences. As a result, it causes individuals to be concerned about their safety and to feel dissatisfied and hesitant, affecting their confidence and the convenience that AV is supposed to give.

Another intriguing thing we've seen is the manner in which and how much information is communicated to the public. Testing AVs when the test pilot has not given important and adequate information regarding his or her supervision, which is crucial while testing AV systems in autonomous mode, is one of the standout observations. When companies were questioned after the accident, they claimed that the testing pilot was not paying enough attention, which is surprising given that a senior highway accident investigator at the NTSB stated that the testing company had provided no guiding documents or adequate transparency of information for the testing pilot [90]. The scenario outlines people's inclination to have a limited level of faith in vehicles and their expectation that an AV will identify at least one passenger on the road with enough time to avert a collision. Let's look at the testing pilot in comparison to the broader population. We can imagine the information gap that would lead to controversial incidents and a lack of trust in adoption, as well as the realisation of the future anxiety, worry, and nervousness that AV would cause among rational users, given the lack of predictability and transparency information provided by these tech companies to the general public.

The interpretation, extent, or degree of transparency of information and AV observable behaviour directly connected to users' abilities to forecast AV behaviour under specific conditions and hold evaluation based on the aforementioned observation and user psychological point of view. The less transparent

the information is, the less accurate individuals are at anticipating AV in specific situations. Furthermore, people's perceptions of AV's dependability are influenced by the transparency of information supplied about AV behaviour in certain situations. Thus for any interpretation, which eventually makes it such a logical and predictable choice that the user will have negative anticipation, resulting in opposed selectiveness of AV, which leads to users' mental state of readiness, where users' behaviour and responses incline toward a negative attitude, with little or no confidence in their safety issues. Apart from the aforementioned argument, exaggerated information is also a major source of anxiety, since individuals are concerned about future usage or expectations based on previous occurrences or experiences. Furthermore, users develop a distrust of AVs when they do not estimate its predictability, dependability, or reliability until they are given with positive, actionable proof or observed behaviour to evaluate AVs. Finally, some minor findings concerning people's concerns about AV equipment and financial loss in the event of an AV disaster were discovered in our data. People are also concerned about their safety, which includes physical harm, future AV unfavourable predicted consequences, and historical occurrences. Apart from accidents, unpredictable AV operation, general trust and knowledge of information distributed directly to users with complete transparency as to what users should or should not anticipate from AV, they will commute for other reasons that consumers are concerned about as mentioned in the classification of sub-categorization.

Our analysis reflected a relationship based on the sentiment and type of source references. We observed the Early bird view diagrams of Articles and Feeds [Article -Early Bird view of Data sub-categorization of CET Table [16] and Feeds -Early Bird view of Data subcategorization of CET Table [17], where we had seventeen positive sentiments and seventeen negative sentiments of thirty-four references to avoid class imbalance resulting in the fair finding of facts and figures in Article_Neutral_minnus -Early Bird view of Data sub-categorization of CET Table [18]. Surprisingly, we were not able to derive any significant changes in percentagewise proportion. However, the analysis reflected an increase in low risk in the articles and doubled the quantity of distrust in sub-categories when

compared. Moving forward, while taking deep-dive data look at references individually and studying separate articles of positive sentiments [Article+ve -Early Bird view of Data sub-categorization of CET Table [19] and Feeds+ve -Early Bird view of Data sub-categorization of CET Table [20]]. Surprisingly, we did not see much deviation in sub-categories which suggests that even if positive sentiments, authors, and writers predominantly agree upon the challenges of AV even though they talked optimism about future AVs. On the other side, we observed more negative variation in negative sentiment Feeds as we compared the feeds of positive and negative sentiments [Feed-ve-Early Bird view of Data sub-categorization of CET Table [21] and Articles-ve-Early Bird view of Data sub-categorization of CET Table [22]]. Similarly, minor variation in positive sentiment feeds as expected, which indirectly supports our article and feeds understanding based on which we performed comparison. Another study made on the positive sentiment of articles and Feeds resulted in lesser severity in terms of sub-categories of Feeds positive sentiment donut diagram [[Article+ve -Early Bird view of Data sub-categorization of CET Table [19] and Feeds+ve -Early Bird view of Data sub-categorization of CET Table [20]] than articles of positive sentiment donut graphs as shown. In Articles donut graphs, authors had a mix of low and high-end on category spectrum, which offer facts demonstrated mainly in Anxiety, Worry, Risk and Attitude sub-categories. Still, even with the Feeds' positive sentiments, the concern regarding the AVs with the sight of future enthusiasm in mind supports the thesis' objective that is shown.

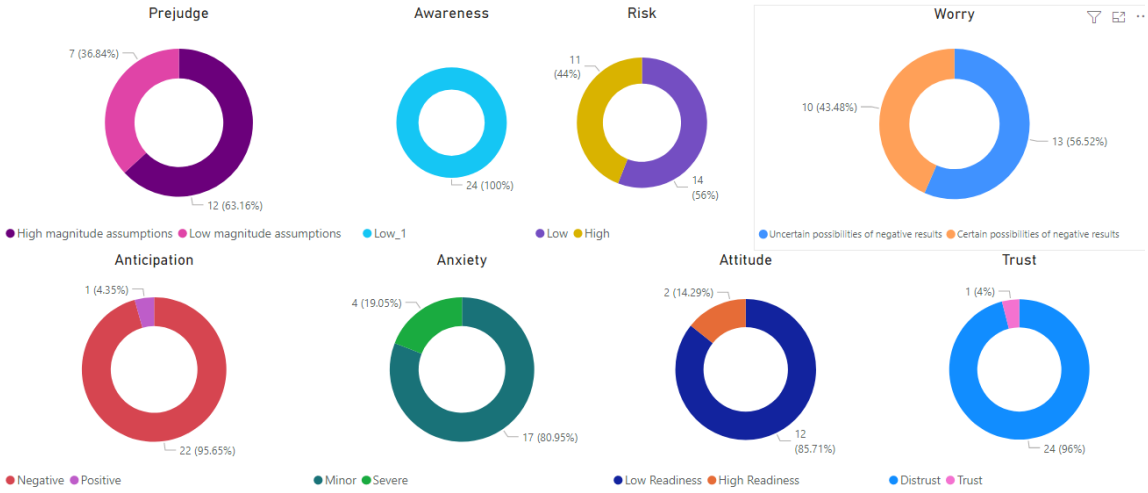

Figure 16: Article -Early Bird view of Data sub-categorization of CET Table

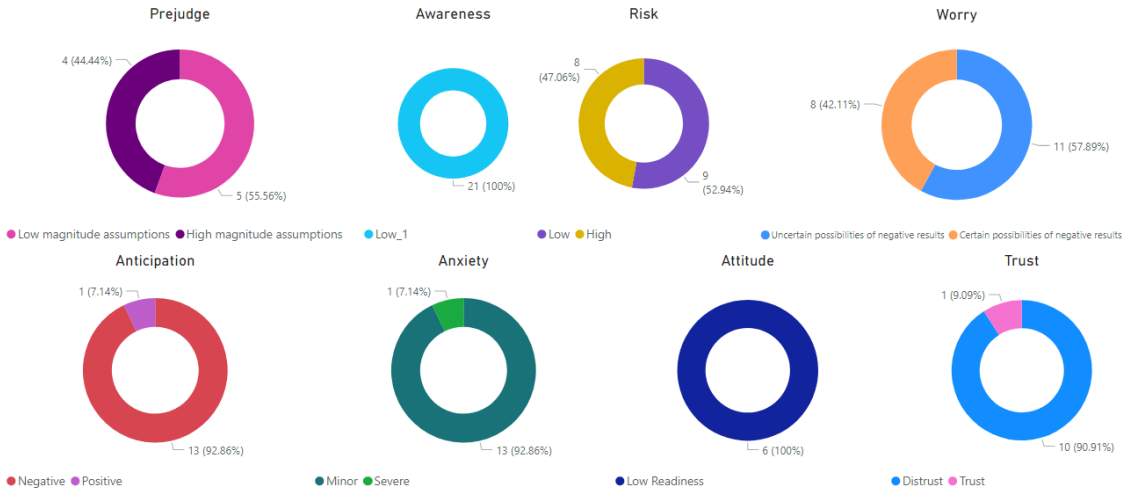

Figure 17: Feed-Early Bird view of Data sub-categorization of CET Table

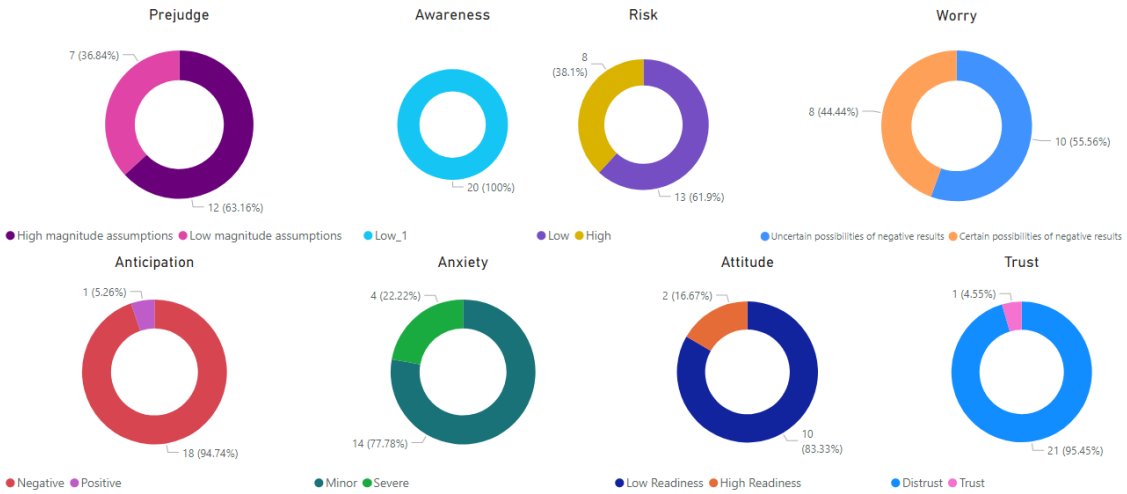

Figure 18: Article_Neutral_minnus -Early Bird view of Data sub-categorization of CET Table

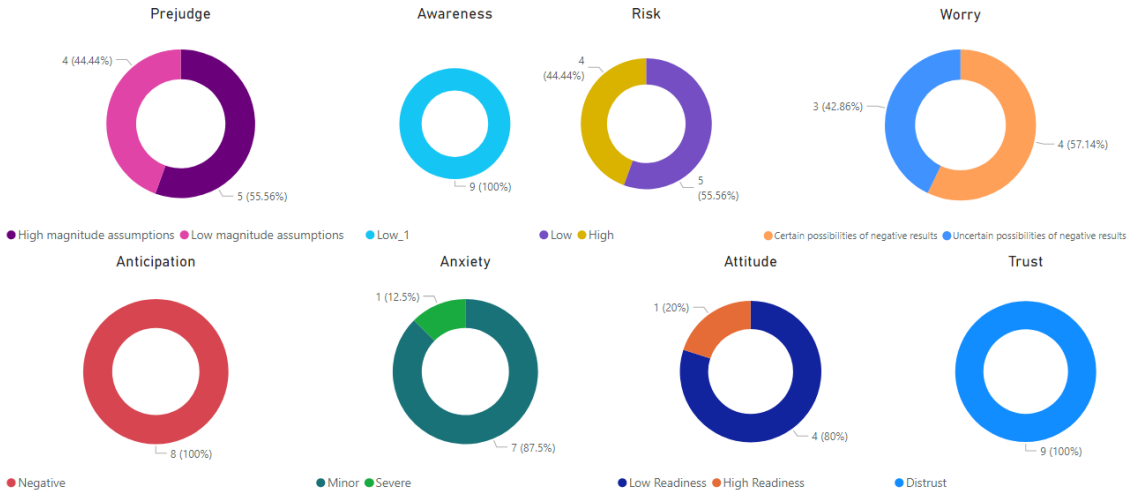

Figure 19: Article+ve -Early Bird view of Data sub-categorization of CET Table

Figure 20: Feed+ve-Early Bird view of Data sub-categorization of CET Table

Figure 21: Feed-ve-Early Bird view of Data sub-categorization of CET Table

Figure 22: Article-ve -Early Bird view of Data sub-categorization of CET Table

Further on, we decided to follow the same procedure as we performed above for the classification of sub-categories. The following diagrams show our result. For the explanation, we select the top five classifications of sub-categorization to showcase the result in graphs.

At the start, we compared all Articles vs Feeds of classification of Sub-categorization (Articles and Feeds Overall classification of sub-categories [23]). In articles, we witnessed concerns about more than considerable optimistic promises regarding their products, resulting in strong negative statements by public figures with non-observable results as time passes by. Secondly, Fear of unpredictable behaviour and the possibility of AV going haywire. Lack of trust and belief in vehicles' reliability. On the other side in Feeds, people's attention on the Ability of vehicles to adapt to unforeseen circumstances. AV needs human supervision. Nervousness over AV system during imminent safety issues. In a positive sentiment of Articles vs Feeds of classification of Sub-categorization comparison (Positive -Articles and Feeds Overall classification of sub-categories [24]), in Articles, we observed Marginal confidence regarding ease of use and nervousness towards AV day to day commute. While in Feeds, Similar concerns were found at a lower case which indicates a cautionary approach towards of adaptability of AV.

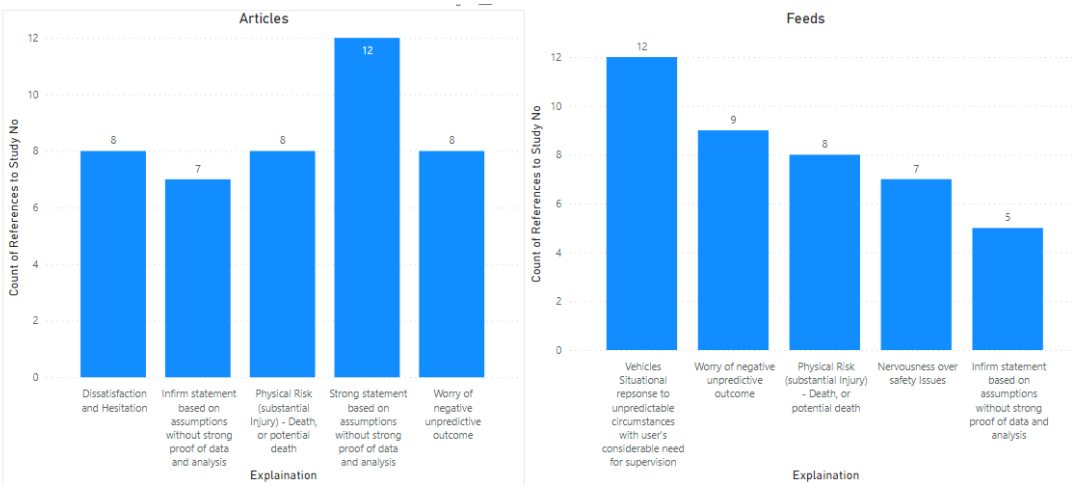

Figure 23: Articles and Feeds Overall classification of sub-categories

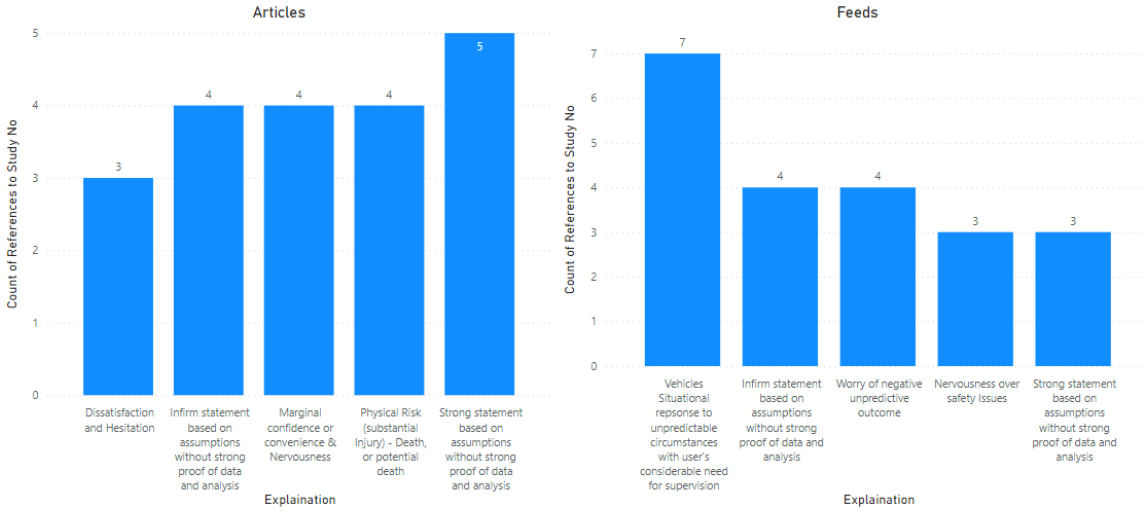

Figure 24: Positive -Articles and Feeds Overall classification of sub-categories

In closing, in a negative sentiment of Articles vs Feeds of classification of Sub-categorization comparison (Negative -Articles and Feeds Overall classification of sub-categories [25]), in Articles, we observed negative concerns highlight at the upper scale of the spectrum. The nonexistence of historical data regarding the AV's handling makes it difficult for users to conclude in adapting the AV. Rare and uncharacteristic behaviour of AV in its regular operation.

In Feeds, concerned observation shown over autonomous vehicles, not handle and respond as per manufacturers' system operation and user's expectations. Expected Recurrence of past demeaning events resulting in anxiety and worry.

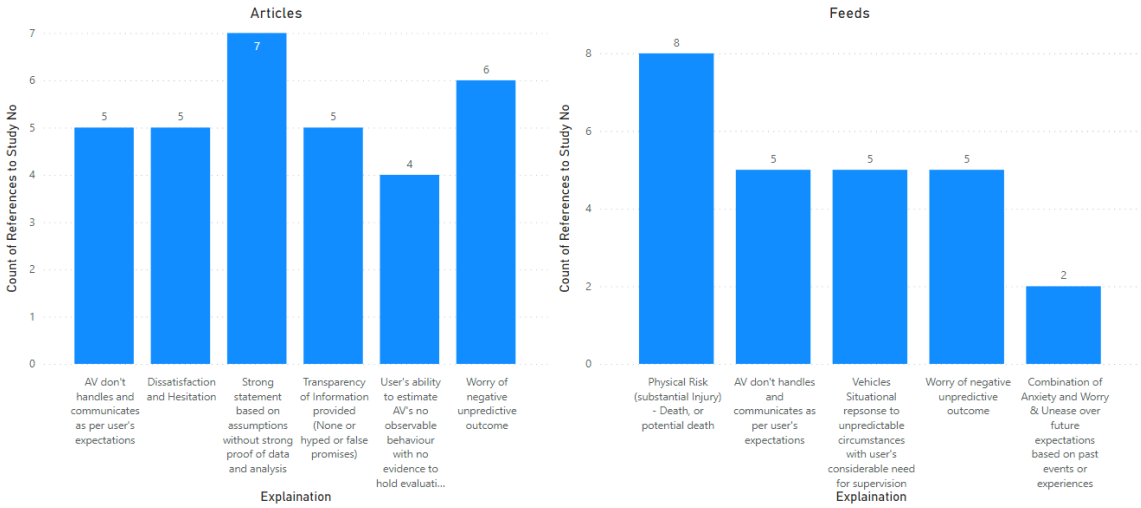

Figure 25: Negative -Articles and Feeds Overall classification of sub-categories

3.5 Discussion

Even though the Discussion section is constrained by the study's design and therefore by the implied constraints discussed in section 3.4, we make a point of substantiating the findings with the two results studies stated in the corresponding paragraphs. We feel they contribute significantly to the study's reliability and credibility, as mentioned below.

This study will look at the psychological elements that influence people's willingness and acceptance. We streamlined and selected eight components that may affect and influence human behaviour after interpreting the complicated terminologies discovered in the research evaluations. Numerous factors, such as the methods or channels via which persons regularly acquire and gather knowledge, are recognised as catalysts. We proposed the CET Hierarchical map and CET table based on our findings and interpretations. The study's findings indicate a connection between our analysis and present concerns about AV acceptance and

willingness. Despite the fact that the sample of references we received appears to be quantitatively fixed, our observation aims to build elements that serve as a fundamental foundation for assessing people's inclination for AVs via the proposed extended CET table.

Positive support for the conclusions and concerns expressed in this study is broadly consistent with the executive summary of a released report by the Victoria transportation policy institute [Litman [91]]. As with our conclusions and findings, the summary emphasises several of our findings to support the sceptical perspective. The article combines positive estimates from industry insiders but dismisses excessive assertions about future benefits. Second, considerable uncertainty, and third, fear and anxiety generated by unpredictable outcomes, limited performance, or human intervention in unforeseen settings, as well as people's future concerns over vehicle technology based on prior vehicle technology experiences. Another study of new mobility services and technologies [Abotalebi and Petruni [92]] corroborates our findings. Additionally, we are gravely concerned about the societal ramifications of technical failures. As a result, some begin to wonder the extent to which AVs can help reduce risk of driving outcomes and avoidable collisions. Additionally, there is no long-term example of AVs making moral judgements that affect societal and ethical dilemmas. Thus, transparency of information is critical for establishing trust and confidence among the people, which notably lacks the same evidence as shown in our observation. Additionally, numerous businesses today devote significant time to marketing their products and high-tech features. However, they pay scant regard to the psychological components that must be expressed in order to attract customers and resolve their difficulties and doubts, as well as to enhance their awareness about the product's doubts explicitly AVs in order to attract the customer with pace.

For the second validation, we analysed the study [93] and linked pertinent results and findings to the fourth pillar proposed by author Azad. Our study's initial discovery echoes the author's concerns regarding AVs' optimism in their ability to prevent collisions and accidents. However, the number of documented

vehicle accidents employing autonomous vehicles raises concerns about the vehicle's ability to reach its full potential. In the second observation, the study corroborates our findings by stating that a system's behaviour should be determined by the passengers' needs and demands, and that passengers should engage with and learn about the AI system in order to establish sufficient confidence. Indeed, several supportive references in our analysis cast doubt based on our findings 3.4. The third observation supports the author's advise to explore alternative viewpoints on businesses' methods for selecting a sample and soliciting feedback from the target market, which results in modification based on sample response. As a result, we believe our method could be considered a way or a stream of knowledge in this direction. At last, we dissected the survey results conducted from executors' perspectives in the study of customer acceptance [93]. We observed the following points resonate with our study: To begin, based on replies, there is continued worry about the hurdles and barriers that must be overcome prior to adopting AVs. It is consistent with our findings, which indicate that a "tug of war" comparison resembling the quantity of optimism demonstrated by interested firms does not reflect the shards of evidence acquired in our study and demonstrated in people's replies. Second, the poll results reveal that there is a widespread lack of awareness and knowledge about AVs and the necessary improvements to build any new technology. Thirdly, poll findings reveal a disconnect between society and AVs. We both agree on the reasons, namely a lack of understanding, and that there is a need to understand society's desire in addition to doing the provincial pilot project, in which our study may add knowledge to help people understand their APW difficulties. Fourth, regulations and rules should be matched with societal wants and needs and then merged into technology in order to establish moral algorithms for AV integration and infrastructure decision-making, but not vice versa. As a result, it likely avoids the social dilemma and contributes to the community's ethical discussion of people's psychological needs. Fifth, both studies are consistent in their emphasis on collaboration between industry and researchers and between industry and the general public, respectively, when it comes to giving transparency regarding the results of test programmes. We feel it has the ability to benefit the prospective benefit and development of AVs, which does not

appear to be the case based on the shards of evidence we encountered during our study. Sixth, the pilot project's existing outcomes and performance are far from perfect, notwithstanding the enthusiasm displayed by interested organisations for marketing objectives. The seventh survey results demonstrate a lack of preparedness and selectiveness in terms of purchasing AVs from respondents' perspectives, indicating that people still lack sufficient confidence in autonomous vehicles, which is bolstered by the low customer acceptance readiness score mentioned in the result [93]. The eight, Both studies concur that safety is a major priority in terms of both research.

Thus, we believe that the thesis' findings will serve as a foundation for future research on the APW of AVs that is specifically concerned with psychological elements and the impact of medium and channel on human behaviour once information is received. The CET table we provided would also be beneficial in providing additional knowledge if combined with other scaling methodologies, such as Josh et al's [88] and Bonneau et al's[89], or any other scaling methodologies that would facilitate the analysis of quantitative and statistical data, which is the future scope of the study. Additionally, the CET Table-Part 2 can be used to assist with item categorization. Alternatively, we can use columns to represent mediums or channels. Additionally, we can evaluate parameters using a complete database or any references. We believe that our skeptical and programmatic style of study informs new dimension to interested manufacturers, emphasises case studies for researchers, and encourages interested researchers to contribute to or improve the study in order to better understand AVs' acceptance and people's readiness to use them in APW issues. Additionally, by elucidating the difficulties associated with these terminologies, connections between human psychology factors, autonomous vehicles, and future technology facilitate people's adoption.

Chapter 4

Conclusions

4.1 Summary

Through a review of the literature, the study demonstrated the interdependence of psychological factors and their influential channels. The study streamlines how people receive information through multiple mediums and channels, thereby could be factor for influencing their choice, particularly with regards to autonomous vehicles (AVs). The study resulted in a theoretical comparative estimation table (CET) and CET Hierarchical Concept Map through a literature review to show the interconnection between the AVs. The CET table establishes a vision and incorporates psychological factors into the discussion of overcoming barriers to people's willingness and acceptance of AVs. The study enables interested manufacturers and academics to approach APW difficulties with AVs via the skeptical and programmatic lens of Human Psychological components and influential mediums or channels. The study encourages and add supplements knowledge to future interested academics to comprehend APW challenges better with corresponding attributes used in the CET table and CET Hierarchical Concept Map..

In our investigation, and based on the findings and facts that we observed, we concluded that the challenge with autonomous vehicles acceptance is not only of technological advancement but rather of comprehending of users viewpoint in an optimistic society. We felt the need to propose a pragmatic approach because we believe that identifying difficulties and providing adequate consideration to overcoming them can

accelerate the process of users' acceptance of AVs. Numerous experts have conducted online or offline individual's response gathering techniques to ascertain how people would adapt to autonomous vehicles. The problem is that people do not always follow through on their words, misstatements relevant data. Thus, in this thesis, we seek to utilise people's psychological characteristics and make an effort to create an extended CET table based on classification, which is further supported by findings and facts derived from studied references presented with visualization, in order to explain the riddle of acceptableness through human psychological characteristics and to grasp people's views and inclinations toward autonomous vehicles.

4.2 Strengths

This study sheds light on the relationship between human psychological components and the manner in which people acquire information via influential channels or platforms. The work attempts to provide insight into the relationship between human psychological factors and the issues users confront. Additionally, the study gives classification examples and rationales for the difficulties encountered by users. The study's correlation between psychological factors, how people process receive information, and the obstacles and concerns they confront provides insight into their perspectives. The study provides insights and cases to address the acceptance and readiness of people to embrace autonomous vehicles. The study simplifies human psychological characteristics and prominent role of media or channel on people's acceptance and willingness. The study provided a CET table and a CET hierarchical concept map to assist researchers in considering AV acceptance and willingness (APW) from the aforementioned perspective in order to address APW difficulties. Finally, but certainly not least, the study's scope encompasses all universal humankind.

4.3 Limitations

The study's scope is confined to the literature we examined. With no time bound, the study uses an intentional random selection of material depending on study objectives. The study is based on an interpretation of the literature review that is subjective and the study imposes manual subjective content interpretation limits. As a result, we

try to focus on aspects that we believe can be generalised. We recognise that each person is distinct and individual, reflecting a wide range of events and variations. The study's limit on eight psychological factors keeping acute focus selection on categories but heavily on generating the CET table due to the nature of the chosen literature subject and selection criteria 3.1.2, therefore anything outside the literature limits the study with the magnitudes of fields.

Due to the nature of the investigation, the hypothesis is considered non-essential in the references we looked at. The study outlines the subjective interpretation of the literature reviews and supporting sources. We also had reason to question the authenticity or reliability of online or offline individual response collection methodologies due to occurrences of conditions people were going through because of the pandemic and lockdown and also precluded us from conducting a field study. Nonetheless, we came to a conclusion that all references in the collection fundamentally represent; in other words, even if they are numbered, they imply a social representation of a social picture due to the references' nature.

Despite the fact that the study's result is based on fixed examined references and their contextual psychological interpretation, as well as revised numerical fixed literature, the investigation is limited by anything other than literature, however, we arguably believe that under another comparable scenario, the extended CET table could emerge as a formula, and that all of the analysed references are formula variables. As a result, the analysis results in the references represent possibilities of outcomes dependent on formula variables provided as inputs which could be highly beneficial as time goes by and as AVs progress with new APW challenges in future. Believing so, we feel, it gives the study future edge in terms of evolutionary future edge to it. Furthermore, the study's references reflect the authors' perspectives and are drawn from educated individuals with extensive experience related to AVs . Due to the nature of the references, the entire collection of references constitutes fundamentally, in short, a social representation of a social picture. Even though the findings are cited in numbered references, they validate our belief when compared to [Litman [91]]. As a result, we believe the study provides a solid foundation for understanding people's inclination toward AVs if use on a site where a testing pilot programme is

being run with comprehend people's viewpoints towards running project.

4.4 Future Directions

With the use of the extended CET table, the study hope the research will aid in the measurement of social acceptance. To assess people's preferences, the study benefits by combining the provision of research outlines in which researchers could use either the Likert scale [Joshi et al [88]] or the comparative assessment scheme [Bonneau et al [89]] or any other measures scale to comprehend a side of human aspects when working alongside pilot studies.

For the upcoming study, the study look for thoughts into some of the ideas, criteria, or aspects that might be overlooked or could be improved, and update the CET table as needed in the future. the study intend to target a variety of sources, primarily or secondary published, in field, online sources others, with the goal of evaluating the efficacy of our CET table using our binary scaling approach to facilitate quantitative and statistical data results that will help for further research.

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tocsectionAppendices

Appendix A

A.1 Sources - visualization analysis

Ref. No	**Author**	**Date**	**Heading (Hyperlink)**
1	Andrew J. Hawkins	2019-11-20	The world's first robot car death was the result of human error — and it can happen again
2	Sam Levin	2018-03-22	Uber crash shows 'catastrophic failure' of self driving technology, experts say
3	Ronan Glon	2021-01-14	NHTSA asks Tesla to recall 159,000 cars over touchscreen failure
4	IntelligentHQ	2021-05-05	Accident With Self Driving Car- How Injury Claims Differ
5	Jack Stewart	2018-03-30	Tesla's Autopilot Was Involved in Another Deadly Car Crash
6	Timothy Carone CNNTech	2018-03-21	Self-driving car accidents will keep happening. We need to learn from them
7	Matt Posky	2019-08-11	NTSB: Autonomous Uber Vehicles Crashed 37 Times Before Fatal Accident
8	NTSB Report	2021-05-03	PRELIMINARY REPORT HIGHWAY HWY18MH010

Table 17: Sources - visualization analysis (1-8)

Ref. No	Author	Date	Heading (Hyperlink)
9	Steph Willems	2018-05-24	NTSB Releases Preliminary Report on Fatal Uber Crash; Vehicle 'Saw' Victim 6 Seconds Before Impact
10	CGTN	2019-11-06	Uber test vehicles involved in 37 crashes before fatal self-driving incident
11	VICTOR LUCKERSON	2015-11-03	Self-Driving Cars Are More Accident-Prone, Study Finds
12	CBC Business	2015-07-17	Google self-driving car has 1st accident involving injuries
13	Andrew J. Hawkins	2018-01-10	Ford-backed self-driving car involved in an accident that sent two people to the hospital
14	Sharona Hakim - Law Offices of Eslamboly Hakim	2017-03-06	Three Cars involved in a Self Driving Car Accident — But Other Driver Was the Cause
15	ERIC RISBERG / JUSTIN PRITCHARD (The Global and Mail)	2015-06-19	Self-driving cars involved in six accidents, other driver at fault
16	Alex Kopestinsky	2021-04-29	25 Astonishing Self-Driving Car Statistics for 2021
17	Dave lee	2018-09-01	Apple self driving car in minor crash
18	Andrew J. Hawkins	2021-05-01	THE AUTONOMOUS VEHICLE WORLD IS SHRINKING — IT'S OVERDUE
19	Michael Wayland	2021-05-20	GM expects to offer personal self-driving vehicles to consumers this decade
20	Hussein Dia - The conversation	2021-04-22	'Self-driving' cars are still a long way off. Here are three reasons why

Table 18: Sources - visualization analysis (9-20)

Ref. No	Author	Date	Heading (Hyperlink)
21	Ekaterina Komendantskaya, Luca Arnaboldi, Matthew Daggitt - The conversation	2021-04-06	Perfecting self-driving cars – can it be done?
22	Francesco Biondi - - The conversation	2020-11-30	Who's to blame when a self-driving car has an accident?
23	James Jin Kang - The conversation	2020-10-14	Robot take the wheel: Waymo has launched a self-driving taxi service
24	John McDermid - The conversation	2020-07-30	Autonomous cars: five reasons they still aren't on our roads
25	John Lunsford - The conversation	2020-06-22	Self-driving taxis could be a setback for those with different needs – unless companies embrace accessible design now
26	Paul Herriotts - The conversation	2020-05-20	Autonomous cars could revolutionise transport for disabled people – if we change the way we design
27	Lionel Peter Robert Jr. - The conversation	2020-04-21	Linking self-driving cars to traffic signals might help pedestrians give them the green light
28	Yulong Cao, Z. Morley Mao - The Conversation	2020-03-06	Autonomous vehicles can be fooled to 'see' nonexistent obstacles
29	Neil G Sipe - The Conversation	2020-02-23	Billions are pouring into mobility technology – will the transport revolution live up to the hype?
30	Andrew Morris - The Conversation	2020-01-14	Are self-driving cars safe? Expert on how we will drive in the future

Table 19: Sources - visualization analysis (21-30)

Ref. No	Author	Date	Heading (Hyperlink)
31	Cameron Roberts - The Conversation	2020-01-05	Self-driving cars will not fix our transportation woes
32	Peter Newman - The Conversation	2019-11-27	Driverless vehicles and pedestrians don't mix. So how do we re-arrange our cities?
33	Raul A. Barreto - The Conversation	2019-11-03	How we feel about our cars means the road to a driverless future may not be smooth
34	David Metz - The Conversation	2019-10-17	Driverless cars won't deliver a transport revolution – and the auto industry stands to lose out
35	Corey Harper - The Conversation	2019-07-23	Bargain-hunting robocars could spell the end for downtown parking – cities need to plan ahead now
36	Jason Thompson, Gemma Read - The Conversation	2019-04-28	Nothing to fear? How humans (and other intelligent animals) might ruin the autonomous vehicle utopia
37	Peter Newman - The Conversation	2019-03-19	Autonomous transport will shape our cities' future – best get on the right path early
38	Zia Wadud - The Conversation	2019-03-18	Driverless cars: how you'll use free time for work and rest – according to research
39	Jennifer Kent - The Conversation	2018-12-03	Why autonomous vehicles won't reduce our dependence on cars in cities
40	Spencer Salter - The Conversation	2018-11-13	Driverless cars may make you sick – but there's a fix
41	Matthew Doude, Christopher Goodin, Daniel Carruth - The Conversation	2018-11-08	Driving autonomous cars off the beaten path

Table 20: Sources - visualization analysis (31-41)

Ref. No	Author	Date	Heading (Hyperlink)
42	Mitchell Cunningham, Michael Regan - The Conversation	2018-09-24	Automated vehicles may encourage a new breed of distracted drivers
43	Dominic Stead, Anthony Kimpton et al - The Conversation	2018-09-12	Why driverless vehicles should not be given unchecked access to our cities
44	Simone Pettigrew - The Conversation	2018-07-04	Driverless cars really do have health and safety benefits, if only people knew
45	Johanna Zmud - The Conversation	2018-07-12	Even self-driving cars need driver education
46	Giselle Rampersad - The Conversation	2018-05-13	We asked people if they would trust driverless cars
47	Saber Fallah - The Conversation	2018-04-24	Driverless cars are forcing cities to become smart
48	Peter Hancock - The Conversation	2018-04-24	Self-driving cars and humans face inevitable collisions
49	Mark Wilson - The Conversation	2018-04-04	Driverless cars are already here but the roads aren't ready for them
50	Nicholas G. Evans - The Conversation	2018-03-27	Self-driving cars can't be perfectly safe – what's good enough? 3 questions answered
51	Alice Salter	2020-11-16	Would you trust a driverless car with the school run?
52	Phil Brown	2020-03-03	How autonomous vehicles could reduce your office working hours

Table 21: Sources - visualization analysis (42-52)

Ref. No	Author	Date	Heading (Hyperlink)
53	Phil Brown	2019-11-11	Prince of Darkness: Autonomous vehicles at night
54	Prof. Jutta Stender-Vorwachs and Hans Steege	2018-11-21	Driverless cars: stop in the name of the law!
55	Gareth Watson	2018-11-07	Working from car: autonomous vehicles and the future of the 9-5
56	2025AD Team	2018-09-11	Driverless delivery: when a robot brings your pizza
57	Dr Joachim Becker	2018-07-18	Blockchain: the driverless car that picks up the bill
58	Angelo Rychel	2016-03-24	Where dreams come alive: driverless cars in the movies (part 1)
59	Angelo Rychel	2018-09-26	BMW expert: "There won't be any acceptance problems with autonomous driving"
60	Stephan Giesler	2018-08-20	Ethical dilemma: will BMW give up fully autonomous cars?
61	Phil Brown	2020-04-06	Autonomous driving: cities of the future
62	2025AD	2017-11-29	Bentley CEO: "the future of motorsports is electric and autonomous"
63	Jack Creasey	2019-01-31	Autonomous driving - are we there yet? (part 2)
64	Ariana Merill	2020-01-07	4 unexpected ways autonomous cars could change the auto industry
65	Alice Salter	2021-05-10	Why some won't go driverless
66	Phil Brown	2019-12-12	Driverless cars: drinking and driverless
67	Stephan Giesler	2019-10-07	Get 15 per cent of your life back - says expert Shiva Kumar on driverless mobility

Table 22: Sources - visualization analysis (53-67)

Ref. No	**Author**	**Date**	**Heading (Hyperlink)**
68	Angelo Rychel	2018-03-20	The fatal uber crash: a critical moment for driverless cars
69	Angelo Rychel	2016-01-12	The car as a living space
70	Kate Mann	2016-07-01	The crash and the consequence: what the fatal Tesla accident means for automated driving
71	Raven Brooks	2019-09-16	Will driverless streets be safe?
72	Angelo Rychel	2018-10-04	Finding the human role in selfdriving car technology
73	Angelo Rychel	2018-05-30	Data privacy: "It's time to treat your car like a smartphone"
74	Angelo Rychel	2016-04-08	10 things people will do in their driverless car

Table 23: Sources - visualization analysis (68-74)

A.2 Sources - Type wise categorization

Ref. No	Author	Proper Date	Heading	Type
1	Andrew J. Hawkins	2019-11-20	The world's first robot car death was the result of human error — and it can happen again	Feed
2	Sam Levin	2018-03-22	Uber crash shows 'catastrophic failure' of self driving technology, experts say	Article
3	Ronan Glon	2021-01-14	NHTSA asks Tesla to recall 159,000 cars over touchscreen failure	Feed
4	IntelligentHQ	2021-05-05	Accident With Self Driving Car- How Injury Claims Differ	Feed
5	Jack Stewart	2018-03-30	Tesla's Autopilot Was Involved in Another Deadly Car Crash	Feed
6	Timothy Carone CNNTech	2018-03-21	Self-driving car accidents will keep happening. We need to learn from them	Article
7	Matt Posky	2019-08-11	NTSB: Autonomous Uber Vehicles Crashed 37 Times Before Fatal Accident	Feed
8	NTSB Report	2021-05-03	PRELIMINARY REPORT HIGHWAY HWY18MH010	Report
9	Steph Willems	2018-05-24	NTSB Releases Preliminary Report on Fatal Uber Crash; Vehicle 'Saw' Victim 6 Seconds Before Impact	Report
10	CGTN	2019-11-06	Uber test vehicles involved in 37 crashes before fatal self-driving incident	Feed
11	VICTOR LUCKERSON	2015-11-03	Self-Driving Cars Are More Accident-Prone, Study Finds	Article
12	CBC Business	2015-07-17	Google self-driving car has 1st accident involving injuries	Feed
13	Andrew J. Hawkins	2018-01-10	Ford-backed self-driving car involved in an accident that sent two people to the hospital	Feed
14	Sharona Hakim - Law Offices of Eslamboly Hakim	2017-03-06	Three Cars involved in a Self Driving Car Accident — But Other Driver Was the Cause	Feed
15	ERIC RISBERG / JUSTIN PRITCHARD (The Global and Mail)	2015-06-19	Self-driving cars involved in six accidents, other driver at fault	Feed
16	Alex Kopestinsky	2021-04-29	25 Astonishing Self-Driving Car Statistics for 2021	Article
17	Dave lee	2018-09-01	Apple self driving car in minor crash	Feed
18	Andrew J. Hawkins	2021-05-01	THE AUTONOMOUS VEHICLE WORLD IS SHRINKING — IT'S OVERDUE	Article
19	Michael Wayland	2021-05-20	GM expects to offer personal self-driving vehicles to consumers this decade	Article
20	Hussein Dia - The conversation	2021-04-22	'Self-driving' cars are still a long way off. Here are three reasons why	Article
21	Ekaterina Komendantskaya, Luca Arnaboldi, Matthew Daggitt - The conversation	2021-04-06	Perfecting self-driving cars – can it be done?	Article
22	Francesco Biondi - - The conversation	2020-11-30	Who's to blame when a self-driving car has an accident?	Article
23	James Jin Kang, Mohiuddin Ahmed, Paul Haskell-Dowland - The conversation	2020-10-14	Robot take the wheel: Waymo has launched a self-driving taxi service	Article
24	John McDermid - The conversation	2020-07-30	Autonomous cars: five reasons they still aren't on our roads	Article
25	John Lunsford - The conversation	2020-06-22	Self-driving taxis could be a setback for those with different needs – unless companies embrace accessible design now	Article

Table 24: Sources - Type wise categorization - part 1

Ref. No	Author	Proper Date	Heading	Type
26	Paul Herriotts - The conversation	2020-05-20	Autonomous cars could revolutionise transport for disabled people – if we change the way we design	Article
27	Lionel Peter Robert Jr. - The conversation	2020-04-21	Linking self-driving cars to traffic signals might help pedestrians give them the green light	Article
28	Yulong Cao, Z. Morley Mao - The Conversation	2020-03-06	Autonomous vehicles can be fooled to 'see' nonexistent obstacles	Article
29	Neil G Sipe - The Conversation	2020-02-23	Billions are pouring into mobility technology – will the transport revolution live up to the hype?	Article
30	Andrew Morris - The Conversation	2020-01-14	Are self-driving cars safe? Expert on how we will drive in the future	Article
31	Cameron Roberts - The Conversation	2020-01-05	Self-driving cars will not fix our transportation woes	Article
32	Peter Newman - The Conversation	2019-11-27	Driverless vehicles and pedestrians don't mix. So how do we re-arrange our cities?	Article
33	Raul A. Barreto - The Conversation	2019-11-03	How we feel about our cars means the road to a driverless future may not be smooth	Article
34	David Metz - The Conversation	2019-10-17	Driverless cars won't deliver a transport revolution – and the auto industry stands to lose out	Article
35	Corey Harper - The Conversation	2019-07-23	Bargain-hunting robocars could spell the end for downtown parking – cities need to plan ahead now	Article
36	Jason Thompson, Gemma Read - The Conversation	2019-04-28	Nothing to fear? How humans (and other intelligent animals) might ruin the autonomous vehicle utopia	Article
37	Peter Newman - The Conversation	2019-03-19	Autonomous transport will shape our cities' future – best get on the right path early	Article
38	Zia Wadud - The Conversation	2019-03-18	Driverless cars: how you'll use free time for work and rest – according to research	Article
39	Jennifer Kent - The Conversation	2018-12-03	Why autonomous vehicles won't reduce our dependence on cars in cities	Article
40	Spencer Salter - The Conversation	2018-11-13	Driverless cars may make you sick – but there's a fix	Article
41	Matthew Doude, Christopher Goodin, Daniel Carruth - The Conversation	2018-11-08	Driving autonomous cars off the beaten path	Article
42	Mitchell Cunningham, Michael Regan - The Conversation	2018-09-24	Automated vehicles may encourage a new breed of distracted drivers	Article
43	Dominic Stead, Anthony Kimpton, Derlie Mateo-Babiano, Dorina Pojani, Jonathan Corcoran, Neil G Sipe - The Conversation	2018-09-12	Why driverless vehicles should not be given unchecked access to our cities	Article
44	Simone Pettigrew -The Conversation	2018-07-04	Driverless cars really do have health and safety benefits, if only people knew	Article
45	Johanna Zmud - The Conversation	2018-07-12	Even self-driving cars need driver education	Article
46	Giselle Rampersad - The Conversation	2018-05-13	We asked people if they would trust driverless cars	Article
47	Saber Fallah - The Conversation	2018-04-24	Driverless cars are forcing cities to become smart	Article
48	Peter Hancock - The Conversation	2018-04-24	Self-driving cars and humans face inevitable collisions	Article
49	Mark Wilson - The Conversation	2018-04-04	Driverless cars are already here but the roads aren't ready for them	Article

Table 25: Sources - Type wise categorization - part 2

Ref. No	Author	Proper Date	Heading	Type
50	Nicholas G. Evans - The Conversation	2018-03-27	Self-driving cars can't be perfectly safe – what's good enough? 3 questions answered	Article
51	Alice Salter	2020-11-16	Would you trust a driverless car with the school run?	Feed
52	Phil Brown	2020-03-03	How autonomous vehicles could reduce your office working hours	Feed
53	Phil Brown	2019-11-11	Prince of Darkness: Autonomous vehicles at night	Feed
54	Prof. Jutta Stender-Vorwachs & Hans Steege	2018-11-21	Driverless cars: stop in the name of the law!	Feed
55	Gareth Watson	2018-11-07	Working from car: autonomous vehicles and the future of the 9-5	Feed
56	2025AD Team	2018-09-11	Driverless delivery: when a robot brings your pizza	Feed
57	Dr Joachim Becker	2018-07-18	Blockchain: the driverless car that picks up the bill	Feed
58	Angelo Rychel	2016-03-24	Where dreams come alive: driverless cars in the movies (part1)	Feed
59	Angelo Rychel	2018-09-26	BMW expert: "There won't be any acceptance problems with autonomous driving"	Feed
60	Stephan Giesler	2018-08-20	Ethical dilemma: will BMW give up fully autonomous cars?	Feed
61	Phil Brown	2020-04-06	Autonomous driving: cities of the future	Feed
62	2025AD	2017-11-29	Bentley CEO: "the future of motorsports is electric and autonomous"	Feed
63	Jack Creasey	2019-01-31	Autonomous driving - are we there yet? (part 2)	Feed
64	Ariana Merill	2020-01-07	4 unexpected ways autonomous cars could change the auto industry	Feed
65	Alice Salter	2021-05-10	Why some won't go driverless	Article
66	Phil Brown	2019-12-12	Driverless cars: drinking and driverless	Feed
67	Stephan Giesler	2019-10-07	Get 15 per cent of your life back - says expert Shiva Kumar on driverless mobility	Feed
68	Angelo Rychel	2018-03-20	The fatal uber crash: a critical moment for driverless cars	Feed
69	Angelo Rychel	2016-01-12	The car as a living space	Feed
70	Kate Mann	2016-07-01	The crash and the consequence: what the fatal Tesla accident means for automated driving	Feed
71	Raven Brooks	2019-09-16	Will driverless streets be safe?	Feed
72	Angelo Rychel	2018-10-04	Finding the human role in selfdriving car technology	Feed
73	Angelo Rychel	2018-05-30	Data privacy: "It's time to treat your car like a smartphone"	Feed
74	Angelo Rychel	2016-04-08	10 things people will do in their driverless car	Feed

Table 26: Sources - Type wise categorization - part 3