

Meta-trend of Trust Factors in Autonomous Vehicles

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BACKGROUND & OBJECTIVE

Research Background

- Over the last few years, the field of AVs has been a rapidly growing area in both industry and academia.
- Perception and understanding of the impact of driverless mobility are related to trust and acceptance of AVs.
- Trust is considered the most important factor for acceptance and willingness to use AVs; therefore, understanding how to encourage trust in AVs remains a key challenge.

Research Objectives

- The present study aimed to identify the main factors affecting trust in AVs in terms of mentioned frequency.

METHOD

- The overall systematic review process using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guideline.
- The Pareto principle was applied in the data analysis process to examine the importance level of factors in terms of frequency.

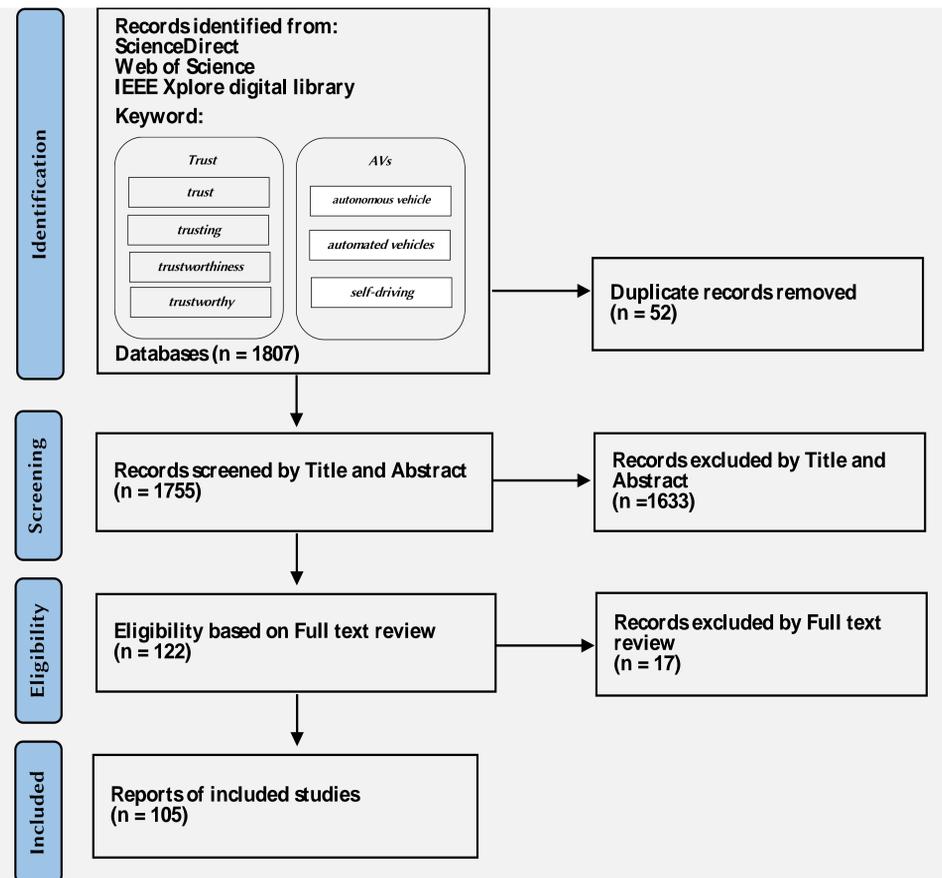


Figure 1: PRISMA diagram showing the flow of studies through the review

RESULTS

- Fifty factors were identified through the SLR process.
- Safety is the most frequently occurring factor involved in 40 counts, accounting for 9.13% of the frequency.
- The top ten factors accounted for 52.02% of the cumulative frequency distribution:
 - Safety
 - Familiarity
 - Security
 - Risk
 - Understanding of AVs
 - Reliability
 - Comfort
 - Technological capabilities
 - Situational awareness
 - Confidence

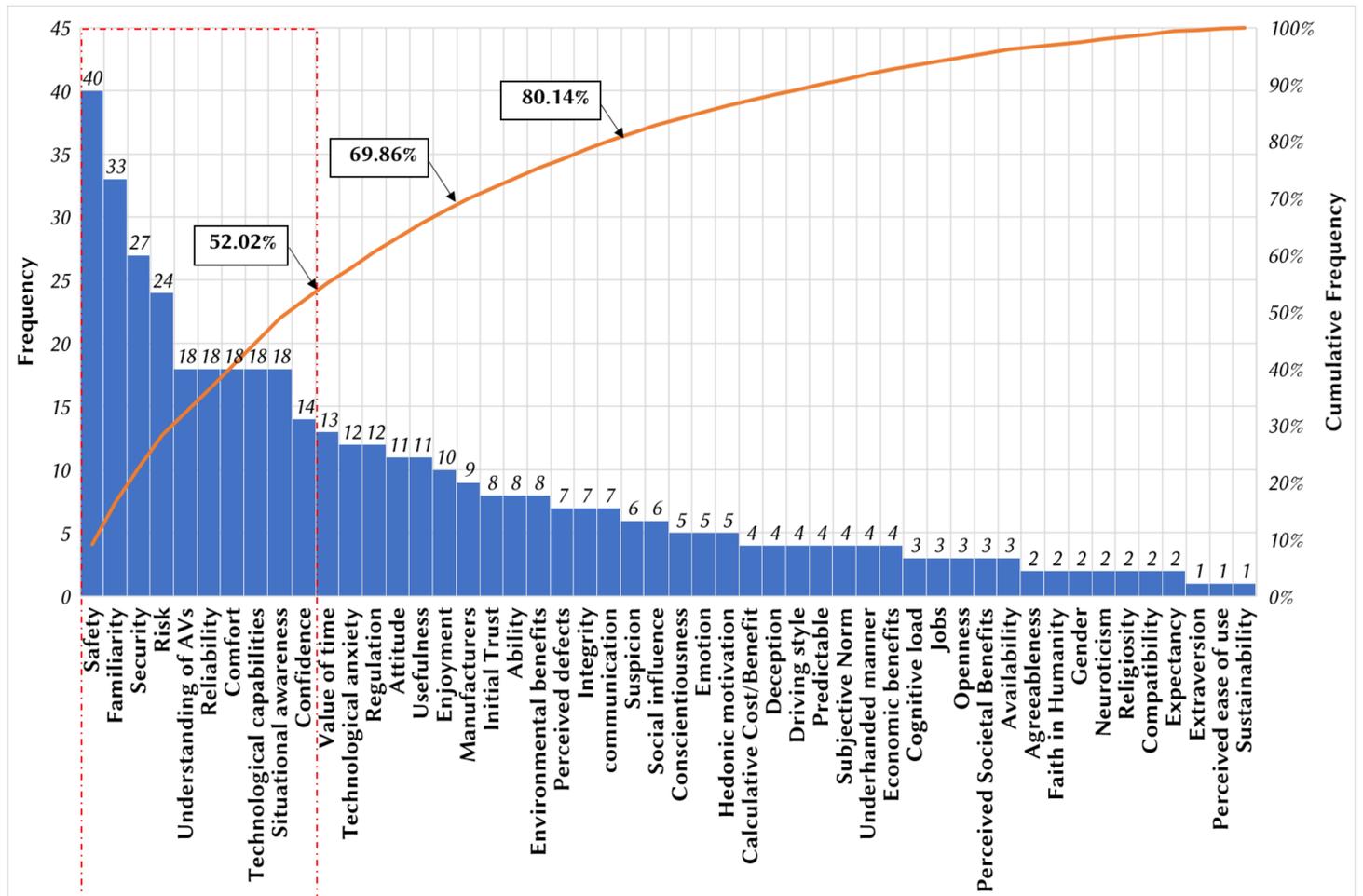


Figure 2: The occurrence frequency of factors for trust in AVs

DISCUSSION & CONCLUSIONS

Brief Findings

- We found the major influencing factors on trust in AVs and provided insights for the implementation of AVs in the future.
- Safety is the most frequently occurring factor: since the perceived safety of the user highly correlates with his trust in technology.

Future Plan

- We also recommend further studies, including the value of time, technological anxiety, regulation, attitude, and other factors, which are essential factors affecting trust of AVs.