Identified Codes and Sub Themes

Theme (RQ1): What are the most evolving functional requirements for the Autonomous vehicle perception system?	
codes	**Sub Themes**
Software and Algorithm enhancement(AI enabled)-	Evolving Technology (Based on AI, ML & Deep Learning)-
Adavancements of sensors-camera,lider,radar and sensor fusion	
Evolving basic functionalities(environmental perception, object detection, l ane tracking)	
Architecture and design	Customer driven requirements
Risk assessment starategies	
Region-Specific Adaptation	Region-Specific Adaptation
Vehicle communication or Vehicle to everything (V2X)	Communication and connectivity
Computational Improvements	Real-time data processing / Quick decision-making
Theme (RQ2): What are the most evolving non-functional requirements for the Autonomous vehicle perception system?	
codes	**Sub Themes**
cyber security	Safety
safety standards	
System performance	Reliabilty and robustness
Data accuracy	
Transparency	User-interface
Trustworthiness	
Compatibility	Scalability
Theme (RQ3): What challenges arise due to the evolving requirements in autonomous vehicle perception systems?	
codes	**Sub Themes**
Increasing cost	Technology adavamcement
Increased requiremnt	
Sensor uncertainity and weather	Sensor uncertainity and weather
Compliance with ISO-26262	Risk assessment & Safety analysis
Simulation-based and real-world testing	
Cyber security risks	

Identified Codes and Sub Themes

Theme (RQ4): What are the consequences of these challenging requirements in the AV perception system?	
codes	**Sub Themes**
Blindspot	Accidents
Reduced functionality	Electronic or software failure
Difficulty in decision making	Difficulty in decision making
Theme (RQ5):How do we mitigate the consequences or challenges of the evolving requirements of autonomous vehicle perception systems using different methodologies?	
codes	**Sub Themes**
SAFE	Agile
Feedback from users	
Agile practices	
Costant testing and validation	
SAFe/Waterfall+Agile	Hybrid/mixed method
V-model+Agile	
Frees tyle development	Frees tyle development