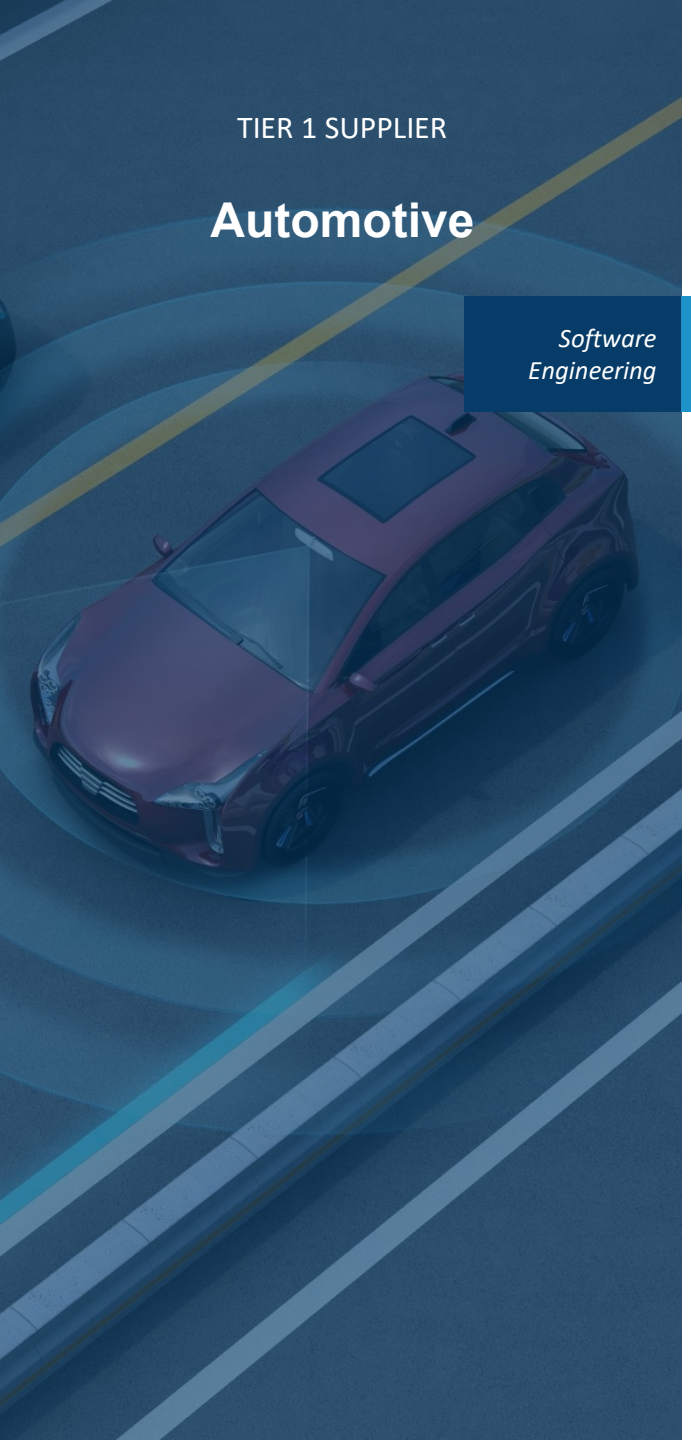

TIER 1 SUPPLIER

Automotive

Software Engineering

DEVELOPING SOFTWARE FOR FORWARD VISION BOUNDARY LANE DETECTION

OBJECTIVES

Develop a forward lane boundary detection feature

MAIN TASKS

- Provide end-to-end development of driver-assist features
- Lead requirement analysis negotiations with client and perception algorithm supplier to fulfill the algorithm performance and feature specifications
- Design algorithm architecture based on the technical safety concept and client requirements
- Implement algorithm for perception features based on the client and algorithm requirements
- Lead resolution of algorithm-related issues during hardware-in-the-loop, software-in-the-loop, and vehicle tests in coordination with the validation/testing team by simulating test data in the model environment
- Demonstrate the feature/algorithm performance to internal and external clients
- Perform model-in-loop testing and analyze the model coverage test results
- Perform static code analysis using tools such as QAC/QACPP code analyzer and Polyspace Bug Finder
- Integrate algorithm into the base software and support algorithm integration into ECU
- Analyze the performance of the algorithm from video clips collected during vehicle tests and synthetic data to resolve feature-related issues
- Perform vehicle tests of the features to analyze and improve the performance of driver assist feature/algorithm

KEY TOOLS & TECHNOLOGIES

- DOORS
- MATLAB
- Simulink
- QAC/QACPP code analyzer
- Polyspace Bug Finder
- C/C++

ALTEN TECHNOLOGY