

CASE STUDY

infopulse



Part of Autonomous Driving Level 3 Project According to ISO 26262 and Misra-C++ Standards

Safety-critical Systems Development Up to Asil-C

Client: Tier 1 Automotive Supplier

Industry: Automotive

Location: EU

CLIENT BACKGROUND

A leading global supplier in automotive solutions development.

BUSINESS CHALLENGE

Infopulse was requested to develop and implement ADASIS v3.0 Code Generator and modify RDS Tool (a code generator for database access classes) in accordance with the ISO 26262 standard. The customer had limited human resources and a tight timeline for completing a series of work packages on their own. All components were essential for mission-critical vehicle systems development and passing Safety Audit based on ISO 26262 requirements.

SOLUTION

Infopulse team built Code Generator and modified RDS Tool complying with MISRA-C++, ADASIS v3 specifications, ISO 26262 up to ASIL-B/C level:

- Tool Classification Analysis;
- Tool Qualification Plan;
- RDS & Code Generator Architecture;
- RDS & Code Generator Changes;
- Safety Manual;
- Test Plan;
- Test Suite;
- Tool Qualification Report.

BUSINESS VALUE

RDS Tool, tailored to ISO 26262 requirements, simplifies preparation for the safety audit. This safety certification is essential for the development of the advanced driver assistance systems (ADAS).

Code Generator allows creating source code in accordance with ADASIS v3 protocol.

These components are part of the electronic horizon provider solution essential for autonomous driving functionality.

TECHNOLOGIES & STANDARTS USED:

ADASIS v3.0

ISO 26262

MISRA-C++

C++

Google Test Unit Test Framework

Static Code Analysis using PC-Lint

CI/CD based on GitLab



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