AJAY PATIL

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OBJECTIVE

Seeking a career in automotive embedded validation testing, leveraging expertise in communication protocols (CAN, UDS) and tools (CAPL, Canoe), to ensure software testing and optimal performance of embedded systems while adhering to industry standards.

PROFESSIONAL EXPERIENCE

- **Robertshaw Controls Pvt. Ltd – Pune**

April 2018 to present…

Having 4.8 years Experienced Automotive Embedded Validation Engineer, specializing in CAN, UDS, CAPL, and Canoe tool. Proficient in developing and executing comprehensive validation strategies for automotive embedded systems, ensuring compliance with industry standards. Adept at leveraging the Canoe tool for efficient software testing and logging of communication networks.

Technical Skills:

- Network protocols: CAN
- Diagnostics protocol: UDS (ISO 14229)
- Network Simulation tools: Vector CANoe
- CAPL scripting and HIL Testing.
- Programming Language: Python (basic proficiency)

ROLES & RESPONSIBILITIES:-

- Analyses the requirements and developed the test cases, test procedures and test reports.
- Performed test cases execution, reported issues and bugs.(JIRA tool)
- Execute the test cases to validate requirement.
- Responsible for SIDs 10, 11, 27, 28, 3E, 85, 14, 19, 22, 2E, 2F,31
- Executed various Diagnostic services like Read DTC, Clear DTC, Read DID, and Run Diagnostic Routines.
- Perform Rounds of Sanity testing, Regression testing and Validation testing to achieve 100% test coverage
- Development of test scripts using CAPL.
- Formulating the CAPL scripts and analyzing CAN network for different SIDs and simulated the network using CANoe tool.
- Participate in Requirement reviews, understand the features and provide early feedback on requirements.
- Creation of Test Environment for Testing, Preparing the Bench Setup.
- Closely working with the team to resolve technical challenges by bridging the knowledge gap.
- Participate in the training and knowledge sharing sessions.

PROJECTS:-

Differential with Slip Control:-Powertrain Model

A differential is a system of gears in the vehicle powertrain that allows the different driven wheels on the same axle to rotate at different speeds. The differential as Powertrain transmission mechanism with Slip control designed for a vehicle to avoid on slipping conditions. The electronic coil inside the differential is activated by driver during the slip conditions to provide torque to non-slipping wheel. On bench it is tested in a CANOE simulation environment, consisting of simulated modules of ABS, BCM to validate the interactive behavior/information with E-locker ECU. It is designed with flexibility to replace the simulated node with real differential E-locker ECU

Sunroof Control ECU :-BCM Model

A power sunroof is mechanically opened and closed by a small motorized component.
Small rods that are attached to the sunroof itself are connected at the other end to the sunroof motor. The sunroof motor spins when it is turned on, pushing or retracting the rods that are attached to the sunroof. This is what enables the sunroof to open or close. A power sunroof, along with all the other vehicle accessories, is operated by electrical power supplied by the vehicle battery.

- **Motherson Automotive Technology & Engineering**: – **Pune**

May 2012 to Feb-2018

- Having process development and quality improvement task on new and running projects.
- Proactively identifying and resolving defects with help of quality technics. RCA
- Identifying and developing scope for process improvements and validate.
- Proactively ramping up project activities, testing process and product with on time deliverables.
- Having working knowledge about FMEA.

EDUCATION

- Bachelor Degree in Automobile Engineering from Shivaji University, Kolhapur. (RIT College)
- HSC from LKVP College, Palus- Sangali.

ADDITIONAL SKILLS

- Good working Knowledge of MS Excel, MS word, MS power point.