N. BABU

EMBEDDED TEST ENGINEER

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CAREER OBJECTIVE:

As an Embedded Test Engineer possessing over 3.5 years of expertise in using Canoe for automotive embedded system validation for infotainment and ADAS. Knowledge on Automation with CAPL. Able to comprehend system customer requirements in order to implement the V model, create test cases, and conduct testing. I am looking for a job where I can grow and where I can Make use of my abilities and experience in creating and carrying out test plans to guarantee the dependability and quality of automotive systems and components.

EMPLOYMENT HISTORY:

Having 3.5 Years Of Experience As a **Embedded Test Engineer** At **HITACHI AUTOMOTIVE** Pvt Ltd From NOV 2021 To Present.

EDUCATION: **Bachelor of Engineering**(B.E)-(ECE)- **SCSVMV UNIVERSITY**, **(Tamilnadu)** 8.17   **2021**

APSWRS SCHOOL & J.R COLLEGE, CHILLAKUR, GUDUR.   822   **2017**

APSWRS SCHOOL & J.R COLLEGE,CHILLAKUR, GUDUR .   8.5   **2015**

PROFESSIONAL SUMMARY:

- Proficient in evaluating and comprehending the system requirements for **Infotainment** and **ADAS**.
- Having Experience throughout the Software Development Life Cycle (**SDLC**), from requirement analysis and design to implementation, testing, deployment, and maintenance.
- Well-acquainted with the **Verification and Validation (V&V) Model**.
- Mastery of various Canoe features such as the **Trace window, Graphical window, Panel window** and **IG block**.
- Having Good Experience on **Test Case Design Techniques** Like **BVA,EVCP,EGT.**
- Great deal of expertise testing infotainment features such as **Bluetooth, Android Auto, Car Play, Navigation** and to BT Profiles Like **GAP,SAP,HFP,MAP,A2DP,AVRCP,PBAP.**
- Being Well-versed in **GNSS,GSM** and **OTA,SOTA and FOTA.**
- Validating different ADAS features like **ACC,RVC, HHA.**
- Well-versed in multiple testing methodologies, including S**moke, Functional, Unit, Integration, Regression, Sanity, Exploratory** and **KPI** testing.
- Issue identification and creation of tracking tickets using the **JIRA** tool and also **Experience on Preparation of Test Cases.**
- Substantial experience in **requirements analysis** the formulation of **test cases** and the development of test procedures.
- Experience in flashing tools **USB Flashing, Fast boot flashing, RENESAS Debugger** and **UDS flashing.**
- Experience on UDS protocol basing **diagnostics** service **ID's** like **10,11, 22, 2E, 3E, 31, 27, 19, 14,85,28** and having good understanding in **NRC's.**
- Familiarity with communication protocols such as **LIN, UDS, CAN** and **CAN TP**.
- Experience on infotainment **TEST BENCH** and **HIL BENCH**.
- Exposure on **CAN FD, ETHERNET PROTOCOLS, ASPICE** and **AUTOSAR**.
- Having Experience in the Automation testing using the **CAPL Scripting**.
- Having good exposure to the electronics **ECU and BCM module, Telematics ECU** and **Cluster ECU.**
- Had a great deal of expertise using the **Hardware-in-the-Loop (HIL) Bench to validate ADAS features**.

SKILLS:

Tools
- CANoe
- CANalyzer
- Diagnostic
- Transmitter.
- Project Loader

Flashing Tools
- USB Flashing
- ADB Flashing
- FAST BOOT Flashing
- Renesas Debugger

Communication Protocols

1 CAN, LIN

2 CAN-TP, UDS

3 CAN-FD, HTTP

4 MQTT,HTTPS.

Log Tools
- USB Logs
- CAN Log
- Serial Logs.
  Putty, Tera Term

Bug Tracking Tools
- JIRA
- ALM

Conclusion Tools
- IBM Rational Doors

Programming Languages
- **CAPL Scripting**

HIL BENCH
E-TAS.

PROJECT : INFOTAINMENT.

Project Title 1 : (MG RX 5 HYBRID)   (NOV 2023 - Present)

Role : Embedded Test Engineer.

Roles and Responsibilities

- **Verification and Validation** of Automotive in-Vehicle **Infotainment** Software.
- Creating and executing test cases based on the **accepted requirements**.
- Analyzing and reviewing the **system requirements**.
- Flashing the software in the infotainment System using **USB, Fast Boot flashing** and **Renesas Debugger.**
- Having a good knowledge of **Test Bench Setup** and having good experience with the test harness.
- Sending signals through **CANoe, CANalyzer** and **CAN TP** tools in **IBM Rational Doors** executing them in the infotainment System.
- Experience on different features such as **Bluetooth, USB, Navigation, FM, Android Auto** and **CarPlay.**
- Experience on HMI functionalities such as **AC, Blower** and speed by sending signals from the CANoe Tool.
- Having a experience on **Diagnostic** service **iDs** like **10,11,22, 2E, 3E, 31, 27, 19, 14,85,28** and having good understanding in **NRC's**.
- Possessing an implementation of various **communication protocols, such as CAN, CANTP, UDS, CAN-FD, and Automotive Ethernet, facilitates communication between the various types of ECU**s.
- I have gained practical knowledge by practicing with various **service IDs, such as Tester Present, read and write DIDs, Session Control, and more. Additionally, RIDs enable the control of functionalities in-car infotainment** software **validation and verification drafting and carrying out test cases in accordance with the Approved specifications, Durability and regulatory compliance** resulting in enhanced safety.
- Verification and configuration of various **DTCs, DIDs** and **RIDs** using **UDS**.
- Extracting serial logs using **Tera Term Tool**, **CAN Logs**, and **USB Logs**.
- **Peformed debugging and firmware using ST Micro controller.**

PROJECT : ADAS

Project Title 2 : (**ISUZU Collision Avoidance System**)   (NOV 2021 - OCT 2023)

Role : Embedded Test Engineer.

Roles and Responsibilities

- Experience Includes Hill Testing **Adas Features which can include RVC and ACC.**
- Having good experience on the analysis of the **requirements** for the ADAS module.
- Having good experience on the Analysis of the **Bug related** to camera sensors.
- Prepared test cases for both **manual** and **automation testing** contributing to efficient quality assurance processes and successful project outcomes.
- Experience on the validation of the **Rearview camera**, **Adaptive Cruise Control** and **HHA.**
- Having good experience rigorous testing and validation of **adaptive cruise control** functionality identifying and resolving issues to improve system reliability.
- Implemented advanced algorithms for RVC integration optimizing image processing and enhancing overall system performance.
- Having experienced in **ECU** testing focusing on **CAN, CAN- TP, UDS, Automotive** and **LIN** communication protocols.
- Expertise in developing and testing advanced driver-assistance systems (**ADAS**) with a focus on adaptive cruise control functionalities.
- Proficiency in creating and evaluating adaptive cruise control features for **Advanced Driver-Assistance Systems (ADAS)**
- Using **AVB** panels in place of infotainment for sending signals through the **Project Loader**, **CANoe tool** and executing test cases.
- Experienced in requirement analysis Test case preparation and secure uploading to **IBM Rational DOORS** with expertise in reviewing and executing requirement test plans and test cases
- The **Adaptive Cruise Control (ACC)** feature, which includes steering control, **automatic speed control, automatic braking efficacy, radar range accuracy, and cluster warnings, was thoroughly tested**. Complete testing of **the Hill Hold Control (HHC) feature was carried out.**
- Experienced In Reporting Bugs And Tracking Tickets.

Declaration : I here by declare that all the statement made above are true and are the best of my knowledge and belief.

N. BABU