Birendra Paswan

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Career Objective

Software Engineer with 3.2 years of experience in Automotive Systems. Seeking a position in a progressive concern whereby I can utilize my skills, abilities & potential to optimum.

Professional Experience

- Strong in C and Embedded C programming.
- Good understanding of Autosar Layered Architecture.
- Hands on experience in COMMS Stack and Diagnostic Stack.
- Working experience with CanTp and DEM Module.
- Working experience with ISO standard protocols like ISO-11898, ISO-14229 & ISO-15765.
- Working Experience with Industrial microcontrollers like Cypress Traveo and Infineon Aurix Controllers.
- Working Experience with Vector cast for unit testing and Google test for Module testing.
- Working Experience with Rhapsody for Software Detail Design (SWDD).
- Experience in using Vector tools like Vector cast and Canoe.
- Experience in using Debuggers like Lauterbach and I-systems.
- Working Experience with QAC and Polyspace Warnings.
- Good understanding on V-model and Agile methodology.
- Good communication and management skills.

Technical Skills

Programming Languages: C, Embedded C.

Protocols Standards: CAN, UDS, I2C, SPI.

Software Tools & Environment: Davinci Configurator, Davinci Developer, Vector CANoe, Eclipse, EB-Tresos, Vector Cast, Agnosar Configurator, GHS compiler, PCAN, LDRA, Candb++, Candel Studio.

Standards & Guidelines: AUTOSAR 4.0, MISRA 2004, ISO-11898, ISO-14229 &ISO-15765.

Requirements Engineering Tools: IBM DOORS & JIRA, JAZZ (Doors next), GIT, GIT-HUB, PTC Integrity.

Hardware & Equipment: VN5610, Lauterbach Debuggers,E2 emulator.

Microcontroller: Infineon Aurix, Cypress Traveo

Working Experience

- Currently working as Senior Software Engineer in **Capgemini Technology Services India Ltd Pune** from Aug 2nd 2024 to till.

- Worked as Software Engineer in **Supremology Software Services Pvt. Ltd. Bangalore** from Nov 2021 to May 2024.

Projects

Project 1: Front Camera Module (SCAM4.8)- PSA Automotive (ZF Hyderabad)

Significantly contributed as a Software Development Engineer spearheading Front Camera Module (SCAM4.8) projects for PSA Automotive and Renault Nissan Mitsubishi. Applied C programming expertise and tools such as DaVinci Configurator, DaVinci Developer, and Rhapsody to drive comprehensive unit testing, intricate software design, and seamless ARXML integration. Demonstrated unwavering commitment to code quality, collaborated seamlessly with teams, and mentored emerging members.

Activity:

Working as a software developer in base software team of Standalone camera Variant and Fusion Camera variant based on SCAM4.8 project for Stellantis.
Responsible for:

- Requirement analysis for the assigned Task in Doors based on Modules like COM and DCM.
- Configuration of Autosar COMMs Stack for the new PDUs to be added and Signal level configuration.
- Implementation and configuration for DCM stack using Autosar Tool.
- Generating Source files in Davinci Configurator & Developer tool.
- Development of the test cases for the functionalities implemented.
- Unit Testing using VectorCast tool.
- Software Detail Design using Rhapsody.
- Fixing MISRA (QAC) and Polyspace warnings.
- Debugging the errors using Lauterbach.
- Creating/ updating the user manual with the changes made.

Tools: Davinci Configurator & Developer tool, Eclipse, Trace32 with Lauterbach, Canoe, Beagle, MFT, WinPTM, VectorCast, Rhapsody.

Project 2: DCM and DEM stack configuration and development for ADCU TATA (Continental automotive, Bangalore)

Activities:

- Requirement analysis for the Diagnostic Spec.
- Implementation of DIDs and RIDs and Security Access.
- DCM (DSL, DSD and DSP) and DEM configuration.
- Fixing up of the errors which occurs while compiling source file.
- Test cases creation and Test report generation.
- Module Test using Google Test tool.
- Analyze the bugs and fixes the issue reported.
- Fixing MISRA C guideline warnings.

Project 3: Comms, DCM and DEM stack configuration and development for ESCL (Electronic Steering Column Lock) for Mahindra and Mahindra, TML and Stellantis (Spark Minda, Pune)

Activities:

- Requirement analysis for the Diagnostic Spec.
- Implementation of DIDs and RIDs, Security Access, DTCs and ASW.
- COMMS, DCM (DSL, DSD and DSP), DEM and Cyber Security configuration.
- Updating the comms signal and message.
- Fixing up of the errors which occurs while compiling source file using GHS compiler.
- Test cases creation and Test report generation.
- Module Test using LDRA.
- Analyze the bugs and fixes the issue reported.
- Fixing MISRA C guideline warnings using LDRA.

Tools: Agnosar Configurator, Eclipse, Renesas E2 Emulator, GHS, PCAN, CANoe, Candela studio, Candb++, Vehicle Spy, LDRA, ELM.

Education

- Balasore College of Engineering & Technology, BPUT, Orrisa in 2017 with 74.6%.
- Jyoti Kunwar College, Fatehpur, Patna, BSEB in 2013 with 67.4%.
- Jawahar Navodaya Vidyalaya, Gandey, Giridih, Jharkhand, CBSE in 2011 with 89%.

Personal details

Nationality: Indian
Languages: English, Hindi

Date:
Place: (Birendra)