

Shraddha S Tribhuvan

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SUMMARY

Embedded professional having around 2.8 years of experience in Real Time embedded system Design and Development.

- 2.8 years of embedded system experience with participation in all phases of product development life cycle and Strong Knowledge in Embedded C, and low-level programming.
- Knowledge of TI280049C Processor Architecture, Hardware and Firmware/Software interfaces of CAN, CANSTACK, DIAGSTACK and MEMSTACK.
- Good experience in the AUTOSAR DCM module
- Good Experience in Autosar Memory Management Module (NVM).
- Expertise in writing and debugging firmware with strong problem-solving skills, Device Drivers, Communication Protocols, Diagnostic.
- Good experience in AUTOSAR Communication Modules that including CANif, CANTp, PDU-R, COM etc.
- Experience with Requirement specification,
- Experience with Architecture, Detailed design specifications, and Traceability preparation.
- Experience in software integration and debugging.
- Experience in Hardware In Loop Testing
- Experience in peer reviews
- Bug reporting and closure
- Certificate:

Embedded Systems course in VECTOR India.

SKILL SET

- **Software Programming Languages:** Embedded C, C++, Basic Linux, and python.
- **Compilers / Editors/ Simulation/ EDA packages:** CCS, IAR and MPLAB.
- **Microcontrollers:** 8051, TMS320F280049C and dsPIC33CK256MP508.
- **Tool:** CANalyzer and LABVIEW
- **Communication Protocol:** UART, I2C, SPI and CAN, LIN, TIMER, Flash etc.
- **ISO Standard:** ISO-15765 and ISO 14229.
- **Configuration:** SVN
- **Design Tools:** Draw IO

EXPERIENCE

Software Engineer at Alten Global Technology Solution Pvt. Ltd

May 2022 -Present

Project-1: Motor Control Unit (MCU)

Tools used:

- Language: Embedded C
- Hardware: TI Micro controller TMS320F280049C,
- Platform: CC Studio.

Key Responsibilities:

- Configured AUTOSAR Service layer, mainly on COMM, BSW, DCM modules.
- CANSTACK requirement gathering listing Tx and RX CAN IDs and Signals
- TI CAN drive understanding and testing and integrate with AUTOSAR MCAL layer.
- PDU configuration for TX and RX CAN IDs

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- CAN Signals TX and RX configuration in communication layer.
- Timer driver used for schedule to 10ms and 100ms task.
- GPIO toggling to check application load.
- Integrating CANSTACK with application and testing.
- DAIGSTACK requirement gathering listing DIDs (Data Identifier) for read and write.
- DIDs configuration for calibration parameters read and write in AUTOSAR DCM layer.
- Part of the following UDS services development and testing
 - Diagnostic session control (Service Id:10)
 - Read data by identifier (Service Id:22)
 - Write data by identifier (Service Id:2E)
 - Read memory by address (Service Id:23)
 - Write memory by address (Service Id:3D)
- Detail Design, Low-level requirements, and Traceability.
- Low -level and architecture design document review.
- Debugging the developed configuration using the CC Studio.
- Tested the BSW components on Target.
- Good Understanding of software level of debugging
- Addressed the issues raised in Tickets HSIT script writing in python to test CAN signals.

Project-2: Electric Drive Train Unit

Tools used:

- Platform: XC
- Hardware: Microchip Micro controller dspic33ck256mp508
- Language: Embedded C

Key Responsibilities:

- Configuration of Autosar Mode management module (**DEM**).
- Configuration of Autosar Memory Management module (**NVM**).
- Requirement gathering listing all faults to DTC.
- DTC configuration with respective fault.
- NVM block configuration with respective DTCs and memory allocation.
- Flash API development to read and write faults.
- Develop logic for Flash two sector read and write fault.
- Part of the following UDS services development and testing.
 - Diagnostic session control (Service Id:10)
 - Read DTC information (Service Id: 19)
 - Communication control (Service Id:28)
 - Clear diagnostic information (Service Id: 14)
- Build integration and Release.
- Prepare low-level documentation.
- Performed testing on both bench setup and Vehicle testing.
- Used Smart Tracker for ticket reporting.
- Used SVN for configuration management.
- Basic software components test case preparation and execution on Target Hardware

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Project-3: PassengerAddressandCabinInterphoneController

Tools used:

- Platform: LABVIEW,
- Hardware: Audio Analyzer, DMM, PXI controller, PXI Relay, PXI Multiplexer and AWG.

Key Responsibilities:

- Prepared system architecture document.
- Code development for hardware interface modules.
- Report generations in word and excel in LabVIEW.
- Prepared test case analyses document.
- Prepared test procedure document for test case development.
- DQMH is used for case development and sequencing.

Integration testing

LANGUAGE

English
German
Hindi
Marathi

EDUCATION

- First Class (7.2) in Bachelor of Engineering in Electronics & Telecommunication from University of Pune, 2019
- First Class (72.65) in Diploma in Electronics & Telecommunication from MSBT University,2016
- Second Class (51.52) in Secondary school certificate Maharashtra Board, 2012