

## Priti Mundewadi

### Embedded Software Engineer

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### SUMMARY

Experienced Embedded Software Engineer with 7+ years of hands-on experience in embedded and automotive software development. Specialized in AUTOSAR Classic and Adaptive architectures, including Diagnostic Event Manager (DEM) and diagnostic service implementation using C++. Proficient in RTOS concepts including task scheduling, ISR handling, and inter-task communication, with experience on AUTOSAR OS. Adept at software integration, debugging, and testing aligned with ASPICE process compliance. Well-versed with tools like Vector DaVinci Configurator, CANoe, Lauterbach TRACE32, and Git to deliver robust and scalable automotive software solutions

### ACADEMIC CREDENTIALS

**NB Navale Sinhgad College of Engineering, Kegaon, Solapur.**  
B.E. in Electronics and telecommunication engineering (2018)

### SKILLS

#### Technical Expertise:

- Programming Languages: Embedded C, C++
- COM Stack & Diagnostics: UDS, DCM, DEM; worked on CAN and Ethernet in AUTOSAR-based applications
- RTOS & OS Services: AUTOSAR OS concepts including task scheduling, ISR handling, events, and runnables
- Standards & Compliance: MISRA C, ASPICE- compliant software development processes
- Source Code & Version Control: Plastic SCM, Git
- Testing & Validation: Unit testing with Google Test (GTest)

### TECHNICAL

- Microcontroller Peripherals Configuration: GPIO, Interrupts, Timers, SPI, I2C on STM32, Bluetooth, BLE, Wi-fi on ESP32 and ESP8266.
- Embedded Systems Development: Driver-level configuration and application of communication protocols (SPI, I2C, CAN, LIN, UART, Wi-Fi, Bluetooth, BLE).
- Real-Time Embedded Programming: Implementing interrupt-driven and timer-based functionalities.

### WORK EXPERIENCE

#### ❖ TATA Consultancy Services (TCS) (from June 2022 to till date)

##### Work Profile: Embedded Software Developer (AUTOSAR)

##### Work on V Module Projects (Nissan SRR5, Ford DAT2 Valeo, Stellantis MegaBCM)

- Performed AUTOSAR-based software development and integration of BSW modules: DEM, DCM, COM, NVM, BSWM.
- Configured and integrated MCAL modules (ADC, SPI, CAN, WDG) using DaVinci Configurator on Renesas RH850.
- Implemented DID (0x22, 0x2E, 0x2F, 0x31) and DTC (0x19) handling logic in UDS diagnostics with ADC-based sensor scaling (e.g., NTC, speed, battery voltage).
- Configured BSWM with AUTOSAR OS for init function handling, task priority selection, and conditional communication/diagnostic control, including UDS Service 0x28

(Communication Control).

- Conducted software integration testing, UDS service validation, and fault simulation in line with ASPICE- compliant processes.
- Developed Python automation scripts for UDS services (0x10, 0x11, 0x22, 0x2E, 0x19, 0x31) and executed test automation using Lauterbach TRACE32 and CANoe.
- Maintained traceability and compliance by linking test cases to requirements in Polarion and JIRA.

**Sellcraft Global solutions Pvt. Ltd. – B. A. TCS (from June 2022 to Jan 2024)**

**Work Profile: Embedded Software Developer (AUTOSAR) Worked on V Module (Detail Design, SUT, SQT)**

- NISSAN MMC Project (Integration and Release)
- SWEET 400 (SUT)

**Tools:** JIRA, Polarion, Davinci, Plastics, Vector Cast, Eclipse, Canoe, Lauterbach, GIT, Trace32 etc.

❖ **Autopeepal Service Solutions (from Jan 2022 to June 2022)**

**Work Profile: Embedded Software Engineer  
Handled Projects as a Firmware Developer**

- Handled FOTAX, BATRAK, CoLoc projects
- Worked on controllers ESP32, MC60, Arduino
- Validation and Telematics

❖ **Ingenium Electronics Pvt. Ltd. (from Nov 2019- Dec 2021)**

**Work Profile: Embedded Developer.**

- Wi-Fi Module (ESP8266, ESP32, Arduino Nano, Arduino uno, TTGO TCALL).
- Athletic Project and Ventilator Project (Arduino Nano with HC05).
- Peristaltic Pump controller and AGV Remote control Project (ESP32).
- AGV Live Tracking Project (ESP8266, VB.NET Study).
- Athletic Mobile Application (MIT app Inventor).

❖ **Evincere Software Solutions Pvt. Ltd. Pune (July 2018 to Nov 2019)**

**Work Profile: E&TC Trainee Engineering.**

- Worked on Wi-Fi Module (ESP8266, ESP32).
- Worked on PCB Design (EasyEDA), PCB Assembly and Testing.
- Worked in Android Studio, MIT app Inventor.

## PROJECTS

- **B.E. Project** : Gender based access control system
- **Mini project** : Microcontroller based auto permission system.
- **Diploma Project** : Hand gesture recognized Bomb Defusing Robot.