

AhmedRaza Shaikh

+91 8237667181 ✉ ahmedraza.j.27@gmail.com [in LinkedIn/Ahmedraza-Shaikh](https://www.linkedin.com/in/Ahmedraza-Shaikh)
Pune, India

Summary

Embedded Software Engineer with 3+ years in AUTOSAR-based development, C/C++, RTOS, and vehicle communication protocols (CAN, LIN). Skilled in ARXML configuration, ECU software integration, debugging, and HIL testing/validation. Enthusiastic about real-time systems, optimizing software performance, and exploring cloud-integrated embedded solutions. Seeking opportunities to innovate in embedded software development.

Skills

- **Programming Languages:** Embedded C/C++, Python
- **Embedded Systems:** AUTOSAR (ASW, RTE, MCAL), RTOS, Low-Level Firmware Development
- **Communication Protocols:** CAN, LIN, FlexRay, SPI, I2C, UART, Ethernet, DTCs, ARXML
- **Development Tools:** CANalyzer, ETAS INCA, dSPACE SystemDesk, Lauterbach
- **Testing & Debugging:** Unit Testing, Hardware in Loop (HIL) validations
- **Version Control:** Git, GitHub, Git Bash, Tortoise Git
- **Methodologies:** Agile (Scrum), ALM, Cross-functional team co-ordination (France, Italy, Brazil, US)
- **Cloud & AI:** Google Cloud Platform (GCP) Gen AI, Software Security Awareness

Work Experience

Tata Consultancy Services Pvt Ltd

Feb 2022 - Present

Embedded Software Developer

Project: Motor Control Processor | Client: Leading Global Automotive OEM

- Developed and optimized motor control software for high-performance embedded systems, incorporating security best practices in firmware engineering.
- Integrated embedded software using C/C++ and AUTOSAR, ensuring real-time execution, system stability, and adherence to security parameters.
- Configured ARXML files, updated RTE interfaces, and implemented seamless, secure software integration.
- Utilized RTOS (FreeRTOS, QNX) and embedded microcontrollers for efficient task scheduling while assessing potential security risks.
- Conducted firmware debugging, Hardware in Loop (HIL) testing, and real-time system validation to identify and remediate possible security vulnerabilities.
- Implemented and tested communication protocols (CAN, LIN, I2C, UART, Ethernet) to ensure secure data exchange and mitigate risks.
- Optimized embedded algorithms, reducing execution time and enhancing system efficiency with a focus on maintaining secure operation.
- Collaborated with cross-functional teams for requirement analysis, feature development, and Agile-based software delivery, strengthening communication across projects.

Education

Savitribai Phule Pune University, Pune, India

2021

Bachelor of Engineering (B.E) | Electrical Engineering

Dr. D.Y. Patil ACS College, Pimpri-Pune, India

2016

Higher Secondary Certificate | Class: 12th

Certifications

- **AUTOSAR Embedded Development:** ETAS
- **RTOS for Embedded Systems:** Udemy
- **Agile Scrum Framework Advanced:** TCS Training Program/ Udemy
- **Google Cloud Platform (GCP) Gen AI:** Foundational Badge by Google.