

PRASAD SUNIL UDAWANT

Senior Embedded Software Engineer

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● **TECHNICAL SKILLS**

♦ Embedded C language programming	♦ Firmware and Device driver development
♦ Embedded systems development	♦ OS/Kernel fundamentals and Internals
♦ Embedded Bootloader and Embedded Operating System development	

● **INDUSTRY EXPERIENCE**

Faurecia India Private Ltd, Pune.

SEP 2020 - PRESENT

- ♦ Successfully performed **board bring up** activity for TI AWR6843 mmWave sensor SOC using Elektrobit **Autosar** stack.
- ♦ Successfully configured OS module for Autosar project using Elektrobit Autosar stack.
- ♦ Successfully implemented Cybersecurity features like **Digital signature verification** for **Bootloader** using Elektrobit Autosar crypto stack.
- ♦ Set up, enabled and trained a team of 25 people for toolchain expertise required for flashing, compilation and debugging the SW by providing necessary training and documentation.
- ♦ Resolved critical hurdle of merging ELF file of bootloader and application by updating linker file and using relocatable linking which allowed successful delivery of project on time.

Cummins Technology India Private Ltd, Pune.

JULY 2016 – SEP 2020

- ♦ Contributed to design, development and optimization of Embedded Operating System and Bootloader for Cummins' ECM (Engines control modules) while working as a part of the global team at Cummins.
- ♦ Developed low-level device drivers for SPI, I2C, DMA, PWM and ADC for PowerPC microcontrollers using **Embedded C** programming language.
- ♦ Implemented firmware for watchdog, timers and clock using 32-bit NXP's PowerPC architecture microcontroller using **Embedded C** programming language.
- ♦ Debugged and resolved bugs related to RTOS scheduler, interrupts, MMU, synchronization (semaphore), ram and stack etc., by using Lauterbach Trace32 debugger.
- ♦ Individually designed and implemented firmware for NXP's HCS08 family 8-bit microcontroller using code-warrior IDE with zero defect in just 3 months. Implemented external bootloader, watchdog, over-speed monitoring and level 3 monitoring safety functional features in it. Developed flash drivers for HCS08 8-bit family microcontrollers.
- ♦ Accomplished good skill in debugging the software using Lauterbach, P&E debuggers and Trace32 SW tool by using it to debug different drivers. Learned to use different functionalities of lauterbach debugger like trace, breakpoints etc.,
- ♦ Collaborated closely with global hardware, system and test teams for resolving bugs in HW, development and bring up of HW modules and requirement update.
- ♦ Resolved issue faced by HW Supplier team by debugging and providing necessary inputs.

● **TOOLS**

Oscilloscope, Trace32, Git, Jira, Bitbucket, CCS studio, Agile & Scrum SDLC, ASPICE.

● **EDUCATION**

AUG 2012 – JUN 2016

Bachelor of Engineering, Maharashtra Institute of Technology, Pune.

- ♦ Achieved B.E. degree in **Electronics and Telecommunication** with 68.11% aggregate score.

● **ACHIEVEMENTS**

- ♦ Received **project of the quarter** award in Cummins from Electronics Department Director by achieving 95% customer satisfaction.
- ♦ Achieved rank in **TOP 10 performer** in Texas Instrument's winter challenge 2015.
- ♦ Achieved NCAT (National Creativity Aptitude Test) AIR 30 in 2014.