SHASHIKANT

Embedded Software Engineer
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Professional Summary

I am an Embedded Software Engineer with 4+ years of experience in Embedded C, real-time systems, and low-power solutions. Skilled in Linux-based platforms including AGL, Yocto, and Peta Linux for FPGA integration. Strong problem-solver and team player focused on building efficient and reliable embedded solutions.

Education

- **College of Engineering, Roorkee** **2022**
  B. Tech in Electronics and Telecommunication Engineering
- **Government Polytechnic, Saharanpur** **2019**
  Diploma in Electronics and Communication Engineering
- **Kisan Inter College, Sherpur Khadar, Muzaffarnagar** **2016**
  10th Standard

Experience

- **FROG Cellsat Limited, Noida || Embedded Software Engineer – 8th July 2024 – Present**

  Project: Digital DAS (Distributed Antenna System).

  Role:

  - Built and deployed custom Peta Linux images from Vivado XSA files for FPGA boards.
  - Booted FPGA using UART and SD card for smooth bring-up and validation.
  - Developed and debugged Embedded C applications on Vitis IDE for board communication.
  - Collaborated with hardware teams to integrate and optimize FPGA–software workflows.

  Project: RF Repeaters (Bare metal and RTOS Programming).

  Role:

  - Developed embedded software for RF repeaters on bare-metal and RTOS.
  - Integrated peripherals (UART, SPI, I2C, Ethernet, Timers) for system functionality.
  - Implemented control logic for repeater modes, uplink/downlink, and gain management.
  - Collaborated with QC and cross-functional teams to identify and fix software bugs.
  - Debugged, tested, and customized software for different repeater models and applications.

- **SARACA Solutions Pvt. Ltd., Noida || Assistant Embedded Engineer - 1st July 2023 – 30th June 2024**

  Project: Photo-Voltaic String Monitor system.

  Role:

  - Prepared all the technical documentation throughout the project.
  - Working with high voltage components which can withstand 2000V DC and 25A of current.
  - Developed Firmware for the PV string monitor with Simplicity Studio.

- Making sure the requirement of the customer is met and satisfied.
- Completing the project within timeline.

Project: AGL X1 Platform.

Role:

- Hands-on experience with the AGL build system and Yocto build tool.
- Created and deployed customized AGL images on Raspberry Pi for instrument cluster applications.
- Worked with local servers and developed automation scripts using Python.
- Customized software with additional tell-tales, enabling its use in 4-wheeler platforms.

- **SARACA Solutions Pvt. Ltd., Noida || Graduate Engineer Trainee - 15th Feb 2022 – 30th June 2023**

  Project: eFleXpine (Spinal Rod Bending Solution).

  Role:

  - Developed STM32 firmware for motor driver control and sensor integration.
  - Designed hardware–software integration for stepper motor control.
  - Delivered project milestones on time with full documentation.

Technical Skills

- C/C++, Embedded C, RTOS
- Communication Protocols – UART, I2C, SPI and knowledge of CAN Protocol
- TCP/IP, Ethernet protocol
- Firmware/Software Development
- Hands-on Experience in Linux (AGL, Yocto), Petalinux
- Hardware – Software integration

Skills

- Leadership and team management capability
- Problem-solving and critical thinking
- Team Player

Tools Used

- VITIS IDE
- STM32CUBEIDE, STM32CUBEMX
- CCSTUDIO
- SIMPLICITY STUDIO
- KEIL IDE
- ARDUINO
- VISUAL STUDIO Code
