OMKAR ANKUSH KASHID

Electronics and Telecom. Engineer | Embedded Software Engineer | C-DAC

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Summary

With over 1 year of dedicated software development experience in the Embedded industry and 2 years of project development experience. I excel at designing complex systems and integrating control software. My robust skill set in programming languages such as Embedded C, C++, Python, and Linux system programming, complemented by a track record of driving growth and reaching significant milestones, aligns with the dynamic needs of transformative embedded solutions. Currently enhancing my expertise by learning real-time rendering with OpenGL.

Experience

Ingenious Engineering & Automation Pvt. Ltd. — Pune, Maharashtra
Embedded software engineer(trainee) — 01 /2023 - 10/2023

- Hands-on training in SQL, SSRS, Node-Red, Arduino, HTML, CSS and IoT Fundamentals.
- Real Time Data storing and displaying on front end software.
- Developed Heavy lifting crane (HLC) monitoring system using IoT Hardware.
- Work as Front-end and Back-end support engineer for HTML, CSS and MYSQL.
- Coordinated the coding efforts using C, C++.

Learnal yaticstech academy Pvt. Ltd. — Pune, Maharashtra
Engineer trainee — 01/2022 - 07/2022

- Doing various Projects on Atmega328, Atmega8A Controller.
- Various projects done using Node-MCU Arduino and Microcontroller.
- Learn IoT concepts.
- Embedded programing using Arduino IDE.

Education

Astromedicomp, Pune - Maharashtra. — Online Mode, October 2024 - Present
Real Time Rendering using OpenGL and CUDA
| Percentage: —

Sunbeam Institute of Information Technology(C-DAC) — Pune, Maharashtra, 03/2024 - 08/2024
Post Graduate Diploma in Embedded System Design (PG-DESD)
| Percentage: **70.6** / 100. (Degree Certificate)

Savitribai Phule Pune University — Pune, Maharashtra, 01/2020 - 07/2023
Bachelor of Engineering in Electronics and telecomm. Engineering
| Percentage: **75** / 100. (Degree Certificate)

Maeer's MIT Polytechnic, Pune — Pune, Maharashtra, 08/2017 - 12/2019
Diploma in Electronics and Telecommunications Engineering
| Percentage: **86** / 100. (Degree Certificate)

Skills

- Operating Systems: Linux, Windows, RTOS.
- Programming Languages: C, C++, Python, and Linux system programming.
- Development Boards: ESP32, STM32 Discovery Board, STM32 NUCLEO Board, Raspberry Pi, BeagleBone, Jetson Nano.
- Protocol Exposure: UART, I2C, SPI, CAN, MQTT, Bluetooth.
- Concepts: CUDA, Linux Device Drivers, RTOS, ARM, Baremetal Programming, Embedded Operating Systems
- Source Control Tools: GitHub.
- Learning from Astromedicomp: OpenGL, Graphics Programming, and Parallel Processing using CUDA.

Projects

- STM32 BareMetalOS - Crafting from Scratch:
  - Platform: Embedded Linux Development
  - Description: Designed an STM32 OS kernel to efficiently manage tasks, ensuring smooth task switching and robust system monitoring. Defined specific tasks for different functions, showcasing a deep understanding of embedded systems development and operating system fundamentals.
  - Project Repository: GitHub - STM32 BareMetal OS

- Intelligent Guided Vehicle (IGV) - Autonomous Agriculture Robot:
  - Platform: Embedded Linux Development
  - Description: Developed an autonomous vehicle for agriculture-based activities such as seeding and crop cutting. The system leverages modern AI and embedded electronics, implemented using BareMetal OS (BMOS) on STM32 microcontrollers. Demonstrated expertise in designing autonomous guided robots for precision farming. The project is in the process of patent application.
  - Project Repository: GitHub - Intelligent Guided Vehicle (IGV)

- Ionizer Based MultipH Water Dispenser:
  - Platform: Embedded System Design
  - Description: Designed a home appliance using electrolysis to produce alkaline water with pH levels of 7.5, 8.5, and 10.5 for health benefits and acidic water for skincare and plant care. Developed a controller and ionizer circuit integrated with outlet valves for customizable hydration. Targeted applications include personal health, fitness, hospitality, and wellness industries.

- Arduino based Gas Leakage Detection for Living Security:
  - Platform: Electronic Circuit Design
  - Description: Developed an innovative safety solution to detect and prevent hazards caused by Liquefied Petroleum Gas (LPG) leakage. The system ensures safety in residential and industrial environments by detecting gas leaks and triggering immediate preventive actions, demonstrating expertise in IoT-based safety systems.
  - Publication: Published Paper - IRJET

- Scrolling display using NeoPixel LED matrix:
  - Platform: Embedded System Design
  - Description: Designed an LED display system using NeoPixel technology with a 300 LED strip controlled by an Atmega328P microcontroller. Integrated USB-to-TTL converter for programming via serial port, enabling remote updates. Developed for modular expansion, making it suitable for colleges, public places, and digital advertising. Features real-time information display with low latency and environmental compatibility. Ensured reliability with a robust power supply and supporting hardware, demonstrating expertise in embedded systems and microcontroller programming.
  - Certificate: M-EXHIBIT(IEEE)
  - Project Repository: GitHub - NeoPixel

Declaration

I hereby declare that the information given above is true to the best of my Information knowledge belief.

Date: Signature: