Hayakreevan J K

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Education

Vellore Institute of Technology Chennai, India

Bachelor of Technology

- CGPA: 9.22

Mahatama Montessori School Madurai, India

High School - Computer Science

- 12th Grade: 86.4
- 10th Grade: 85.8

Experience

Huegli Tech Engineering Pvt Ltd., Bangalore, India

Junior Associate Intern *September 2023 – August 2023*

- Gained hands-on experience with PIC microcontrollers, including programming, debugging, and integration with various communication protocols such as I2C, SPI, and UART, to develop efficient embedded systems for real-time applications.
- Designed and routed printed circuit boards (PCBs), applying industry best practices for component placement and signal integrity to ensure efficient and reliable circuit performance.
- Utilized MPLAB X IDE for programming and debugging PIC microcontrollers, and Eagle for designing and routing PCBs, focusing on optimal component placement and signal integrity to ensure reliable system performance.

Projects

Garment Inventory Database Management | *Embedded Systems, IOT*

- Developed a Web-Based Employee Data Acquisition System using HTML, CSS, and JavaScript, enabling real-time collection of employee data such as attendance, time-in, and time-out through a user-friendly interface.
- Deployed a Web Server on ESP32 to handle HTTP requests, process employee data, and integrate the web interface with the microcontroller for seamless data transmission and processing.
- Implemented Data Storage and Communication between the ESP32 and external databases or cloud services (optional), ensuring secure and efficient handling of employee data for later analysis or reporting.

Embedded Gesture Control System for Automation| *Embedded System, IOT, Python*

- Developed a Gesture Control System using OpenCV to capture and recognize hand gestures via webcam, translating gestures into real-time control commands for automation tasks.
- Integrated Arduino with Node-RED for seamless communication between the gesture control system and IoT devices, enabling wireless automation and control of connected devices.
- Designed and Implemented a Hardware Setup for light control automation, utilizing Arduino to control physical devices based on detected gestures, enabling hands-free interaction with home automation systems.

Technical Skills

Languages: C, Embedded C, Java
Communication Protocols: UART, SPI, I2C
Developer Tools: Keil uvision, Mplabx, Model Sim, Quartus Prime, Eagle
Hardwares: PIC, ARM, 8051, 8086, Arduino, ESP32
Programming Skills: Data Structure and Algorithms, Competitive Programming