KALYAN SARABU

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OBJECTIVE

Recent ECE graduate seeking an entry-level position in the embedded industry. Eager to apply technical skills to contribute to innovative projects. Committed to continuous learning and growth within a company, leveraging expertise in C, Embedded C, Python and hardware interfacing to enhance engineering solutions

EDUCATION

Bachelor of Technology, Electronics and Communication Engineering
Audisankara Institute of Technology, GUDUR, 2020-2024 CGPA: 7.5
Coursework: Embedded Systems, Microcontrollers, Digital Signal Processing, Analog and Digital Electronics
12th, Krishna Chaitanya Junior College, Nellore, AP CGPA: 8.3
10th, Sri Vivekananda High School, Nellore, AP CGPA: 8.5

TECHNICAL SKILLS

Languages : C, Embedded C, C++, Python
Protocols : UART, I2C, SPI, CAN
Micro-controllers : 8051, STM 32, ARM Cortex-M3 LPC1768
Tools & Platforms : Keil IDE, MPLAB IDE, Proteus, Picsimlab
Operating Systems : Windows, Linux

PROJECTS

Digitally Controlled Frequency Generator *August 2024*
AT89C51 Microcontroller, Embedded C, Quad Seven-Segment Display, Keil IDE, Proteus Simulation

- **Variable Frequency Control**: Enabled precise frequency adjustments using a hex keypad, allowing frequency values to be set up to 9999 Hz.
- **Real-Time Display**: Implemented a quad seven-segment display to show frequency values as they are entered, providing immediate feedback to the user.
- **Push Button Activation**: Configured square wave generation with a push button linked to the INT0 external interrupt, ensuring user-controlled frequency output.
- **Efficient Timer Management**: Utilized Timer 0 for display refresh and Timer 1 for frequency generation, achieving smooth and accurate performance.
- **Challenges & Solutions**: Successfully optimized timer usage to avoid overlap and reduced latency in display response, leading to a seamless user experience.

INTERNSHIP EXPERIENCE

Embedded Systems Intern, Emertxe February *2024 - March 2024*

- Applied C and Embedded C programming skills to implement projects using the PIC 16F877A microcontroller.
- Developed a *Washing Machine Simulator* project, simulating real-life functionality with Picsimlab and MPLAB IDE.
- **Skills Applied**: Embedded C, PIC Microcontroller programming, project debugging and testing.

CERTIFICATIONS

- **Internet of Things (IoT)**
  NPTEL - IIT Kharagpur ⋄ Covered IoT protocols, networking fundamentals, and project management essentials for embedded applications.