KALYAN S A R A B U

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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.