Pendlikatla vinay kumar

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# Objective

I am a motivated individual with a strong desire to learn and grow. I am seeking a career opportunity that allows me to apply my skills while expanding my knowledge in designing and developing embedded solutions. I have a solid foundation in programming, with proficiency in C, C++, and data structures, and a keen interest in microcontrollers, real-time operating systems, and hardware-software integration.

# Education

* **Jawaharlal Nehru Technological University | Grade: 65%** Aug 2021 - May 2024

*Bachelor of Technology- Electronics and Communication Engineering* Anantapur, India

* **State Board of Technical Education and Training | Grade: 68%** July 2018 – Aug 2021  *Diploma Electronic and Communication Engineering* Kadapa, India
* **State Board of Secondary Education | Grade: 73%** July 2017 - April2018

*10th - Secondary School Certificate (SSC) Kadapa, India*

# Projects

* **A Weather and Time-based Smart- Lighting System** Nov 2024 - Feb 2024
  + Designed and implemented a weather and time-based smart lighting system using the ‘LPC1768’ microcontroller, integrating sensors for temperature, light, and rain detection, along with a real-time clock (RTC) for time-based control.
  + Utilized relay modules for controlling high-power lights based on sensor inputs, with manual override options for user control.
  + Developed energy-efficient lighting solutions, ensuring optimal performance in smart home and environmental applications.

**-4 - Bit Parallel Shift Register Using Enhanced Triggered Low Power D-Flip Flop (EPTLFF)** Jan 2024 - May -2024

* + Designed a 4-bit parallel shift register using RTSPC D-Flip Flops for low-power, high performance applications.
  + Achieved minimal power dissipation while maintaining fast data transmission.
  + Operating voltage 0.7v to 1.2v, optimized for low-voltage operation to minimize power dissipation.
  + Power consumption achieved ultra-low power consumption of around 1.56**µ**w at 0.7v, ensuring efficiency in high performance digital circuit.

**-Smoking Detector Using MQ5 Gas Sensor** Dec 2022 **-** Mar-2023

* + Developed a smoke and gas leak detection system using MQ5 gas sensor and Arduino microcontroller.
  + Integrated piezo buzzer for sound alert and SMS notifications via GSM module.
  + Powered by a 4v battery, ensuring low power consumption for continuous monitoring.
  + Applied to fire safety in residential and commercial building like hospitals and malls.

# Technical Skills

* **Programming Languages :** C, C++, Data Structures, Embedded C
* **Microcontrollers :** Lpc1768, 8085
* **Protocols :** UART, I2C, SPI, CAN
* **Operating System :** Windows, Linux
* **IDEs :** Keil µvision, VS Code

# Certifications

* Professional diploma in *Embedded and Automotive systems - Cranes Varsity (2024 - 2025)*
* Internship in Internet of Things - Slash Mark (2024)
* Certificate on python - Dev’ Skill Hub (2024)
* Data science for engineers by – NPTEL, IIT Madras (2023)
* PCB design work shop (2022)

# Achievements

* Achieved 80% proficiency in C programming on Code Chef.
* Earned certifications in C from Hacker Rank.
* Participated in AXION and AAVISHKAR Tech Symposiums.
* Holder of NCC ‘C’ Certificate - Demonstrated leadership and discipline.