

## OBJECTIVE

To secure an entry-level position as an Embedded/Firmware Engineer where I can apply my technical expertise in microcontrollers, digital electronics, and embedded systems to contribute to innovative solutions. I aim to contribute to innovative projects that leverage my technical knowledge, problem-solving skills, and adaptability. With a passion for technology and a commitment to learning, I aim to deliver efficient results while growing alongside the organization.

## CONTACT

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- Varanasi, Uttar Pradesh

## ACADEMIC DETAILS

- CDAC in Embedded Systems and Design(Aug. 2024 - Present)
- B.Tech(ECE)- IIMT College of Engineering (2017-2021)
- Intermediate - Raj English School(2015-2017)
- Highschool - Sant Atulanand Convent School

## TECHNICAL SKILLS

- Programming Languages - C,C++, Python

# Avanish Kumar Singh

I am passionate about leveraging cutting-edge technology to design and develop innovative embedded systems and electronic solutions. My enthusiasm lies in solving complex technical challenges, creating efficient and reliable systems, and contributing to advancements in IoT, automation, and embedded development. I am driven by a desire to continuously learn, and deliver impactful solutions that enhance user experiences.

## PROFILE

- Completed project named as “Smart Shopping Trolley”
- Certification in C from NIIT.
- Good knowledge of—
  - Microprocessor 8051,8085,8086
  - Communication Protocols
  - Embedded Development
  - Debugging and Troubleshooting
  - Knowledge of basic electronic components and it's working.

## WORK HISTORY

### Electronics Engineer

*Vivaan Electronics Technology Pvt. Ltd.*

May 2023 – April 2024

- Programmed and operated Yamaha Mounting Machines for PCB fabrication, ensuring precision and efficiency in component placement.

- Operating System –Linux, Windows
- ARM Microcontrollers- GPIO,UART,I2C,SPI,CAN PWM,TIMERS,ADC,DAC
- Embedded Operating System
- Real Time Operating System(RTOS)
- Basics of Linux Device Driver
- IoT(Bluetooth,Zigbee)
- DSA
- Basic Digital Electronics
- Managed the programming and maintenance of machines for various types and sizes of PCBs and their components.
- Collaborated with senior team members to improve workflows and enhance production efficiency.
- Gained hands-on experience in PCB fabrication and troubleshooting complex hardware issues.
- Played an integral role in maintaining quality standards and streamlining production processes.

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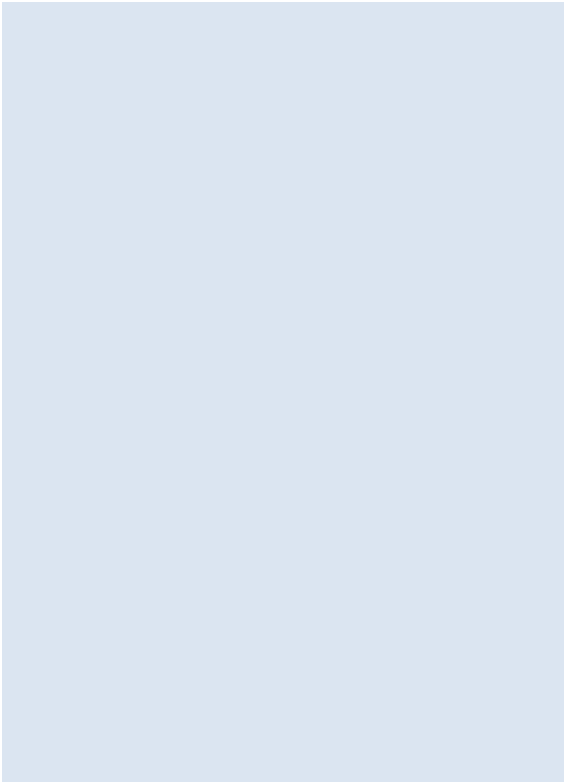
## ACADEMIC PROJECTS

### RFID-Based Attendance System( Currently working on this project)

- **Technology Used:** STM32F407 Microcontroller, RC-522 RFID Module, LCD, Buzzer, SPI Protocol, UART Protocol.
- **Description:**  
Developed an attendance system using an STM32F407 microcontroller board. The project integrates an RFID module (RC-522) connected via SPI protocol and an LCD through UART protocol to display the name and ID of individuals for attendance marking. A buzzer provides audio feedback for successful marking.
- **Key Contributions:**
  - Programmed and interfaced RFID and LCD modules using STM32 CUBE IDE.
  - Optimized communication protocols for efficient data transfer.
  - Conducted thorough testing to ensure system reliability.

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### Smart Shopping Trolley

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- **Technology Used:**  
IR modules, Bluetooth, Arduino, Display modules.
  - **Description:**  
Developed an Arduino Uno-based automated billing system to simplify shopping experiences. The system allows customers to purchase items hassle-free, avoiding long queues. Integrated a database that provides discounts for customers and auto-generates billing amounts.
  - **Key Contributions:**
    - Designed and implemented the hardware and software components.
    - Improved shopping efficiency through automation.
    - Completed the project under the guidance of Prof. Deepak Sahu.