# Hayakreevan J K

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## Education

**Vellore Institute Of Technology** — Chennai, TamilNadu
*Bachelor of Technology* — *Expected 2025*
- CGPA: 9.22

**Mahatma School Montessori (CBSE)** — Madurai, TamilNadu
*Computer Science*
- 10th Grade: 85.8 / 2019
- 12th Grade: 86.4 / 2021

## Experience

**Assistant Junior Engineer** — September 2023 - October 2023
*Huegli Tech Engineering Pvt Ltd.,* — *Bangalore, Karnataka*
- PCB Design Basics - Routing, Components Placements, Tracing, Fabrication
- Firmware programming using PIC (PIC16F877A) microcontroller basics
- Electronica India 2023 - Bangalore International Centre (BIEC)

## Technical Skills

**Languages**: C, Java, Python, Assembly
**Communication Protocol**: I2C, SPI, UART
**Developer Tools**: Arduino IDE, Keil uvision, Proteus 8 Professional, LTSpice, Tinkercad
**Hardware**: Arduino UNO, 8086, 8051, ESP32, STM32, PIC16F877A
**Hardware tools**: Oscilloscope, Soldering Kit, Signal Generator, Breadboard

## Projects

**Streamlining Data Management for Garment Manufacturing** | *Embedded System Design*
- Data Acquisition via barcodes and processing it using Python, which improved manufacturing efficiency by reducing tracking errors by 60%
- Python for database management and the tracking enhanced productivity by providing real-time updates on work completed by each employee.
- Each garment's final output includes a database tracking employee involvement, facilitated by a final barcode.

**Home Automation Using IOT And Computer Vision** | *Python and Embedded System*
- Data Acquisition via a camera and processing it using Python with computer vision methods.
- Utilizing an IoT MQTT broker to trigger actuators by interfacing Python with Node-RED.
- By integrating Python, IoT MQTT, and computer vision, the system significantly enhanced the automation of various home functions, leading to increased efficiency and convenience.

**Dual-Level Controllable Lift** | *VLSI Technologies*
- Implementing a finite state machine with multiple flip-flops.
- Cadence Virtuoso tool automates chip manufacturing processes, incorporating ERC (electrical rule check) and DRC (design rule check) capabilities.
- This project utilizes compact and essential NAND technology with a 980 nm chip design.

## Soft Skills

**Languages**: Tamil, English
**Communication**: Proficient and Fluent
**Teamwork**: Collaborative synergy
**Leadership**: Good Leader
**Critical Thinking**: Analytical reasoning
**Creativity**: Innovative thinking
**Problem-Solving:** Optimal solution-oriented
**Time Management:** Efficient scheduling