

# AJIT KUMAR

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## SKILLS

**Languages:** C, C++, Python, HTML, CSS, JavaScript, SQL

**Developer Tools:** Git, GitHub, VS Code, Google Colab, Anaconda Navigator, PyQt Designer, Streamlit, Flask

**Data Science & ML Libraries:** NumPy, Pandas, Matplotlib, Seaborn, Scikit-learn, TensorFlow / Keras

**IoT & Hardware:** ESP32, Arduino IDE, Raspberry Pi

**Office Tools:** Canva, Jira, Microsoft Teams, Word, Excel, PowerPoint, Power Automate, Office 365

**Others:** IoT, AI / ML, Linux, Phishing Attacks & Prevention, Cryptography

## PROJECTS

### PCB Calculator (Motor, Trace Width, Magnet, 3D Visualisation)

- Designed and deployed a **full-stack PCB calculator** implementing **IPC-2221 standards** for trace width, motor, and magnetic field calculations
- Automated complex **electrical and PCB design calculations**, reducing manual effort and errors
- Developed a **responsive, real-time computation interface** with seamless frontend-backend integration
- Implemented modular calculation logic to support **scalable PCB and motor design use cases**

### System Control Cross-Platform Remote Administration Bot

[github.com/ajit421/Syscontrol](https://github.com/ajit421/Syscontrol)

- Built a Telegram-based remote administration tool with cross-platform support for Windows, macOS, and Linux.
- Implemented real-time system monitoring, screenshot and webcam capture, clipboard access, command execution, and file management with secure authentication.

### Smart Calculator AI-Powered Handwriting Recognition Web App

[ajit421.github.io/smart-calculator](https://ajit421.github.io/smart-calculator)

- Built a responsive canvas-based application that recognises handwritten math expressions and provides instant solutions using Google Gemini AI.
- Implemented user-friendly features such as undo/redo, colour palette customisation, and export-to-PNG

### Smart Lithium-Ion Battery Management System

[GitHub](#)

- Designed an IoT-based solution for performance tracking and device synchronization using Microsoft Azure.
- Implemented cloud-native backend and Azure IoT Hub pipelines for seamless device communication.

## EXPERIENCE

### Airbuddy Aerospace Pvt. Ltd. (Intern) | 6 Months

May - Nov 2025

- Built PCB Trace Width and Magnet Calculators.
- Applied IPC-2221 standards to improve accuracy and usability for IoT and motor design projects.

### IoT Software Developer Intern | DeepValley EMA | 2 Months

Jun - Aug 2024

- Developed a smart lithium-ion battery management system with hardware-to-cloud integration for real-time monitoring
- Built Azure IoT Hub pipelines ensuring reliable device synchronization and data ingestion.

### Industrial Training & Internship in Internet of Things (IoT) NIELIT, Patna | 1 Months

Dec 2024

- Completed training on IoT fundamentals, sensor/actuator integration, Arduino Programming, ESP32, and cloud platforms.

## EDUCATION

### Government Engineering College, Khagaria

Khagaria, Bihar

2022 - 2026

Bachelor of Technology, Computer Science & Engineering (Specialization in IoT)

### B.S.S. College, Bachri Piro

Bhojpur, Bihar

2020 - 2022

Intermediate, BSEB

### Sri Surya Nath High School, Hanswadih

Bhojpur, Bihar

Matriculation, BSEB

2020

## ACHIEVEMENTS & AWARDS

- Secured 90/100 in NPTEL "Introduction to Internet of Things" Jan - Apr 2025
- Winner, **Best Idea Challenge** at CDAC Bootcamp 2024 for proposing a **Hybrid Drone** (UAV) using **ENUM** Technology
- Volunteer, **Start-up Cell, Government Engineering College, Khagaria**.
- Led a team of 22 students in TechMITI'23