

Navin V

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SUMMARY

2nd-year B.E. Robotics and Automation student (CGPA 8.59) with a strong focus on Software Engineering, Full-Stack Web Development, and Mobile App Development. Experienced in architecting secure Python/FastAPI backends, building cross-platform apps (Flutter), and delivering database-driven software solutions. With a proven track record of co-founding student startups and developing national award-winning prototypes, I am seeking a software development internship to leverage my programming expertise to build robust, high-performance applications and scalable systems.

EDUCATION

Madras Institute of Technology

Bachelor of Engineering in Robotics and Automation

Chennai, India

2024 – 2028

- **CGPA:** 8.59/10.0
- **Coursework:** Object-Oriented Programming, Data Structures, Automation in Manufacturing (NPTEL).

TECHNICAL SKILLS

Languages: Python (Advanced, OOP), C++, SQL, JavaScript (Node.js)

Frontend & Mobile: Flutter, React.js, HTML/CSS

Backend & APIs: REST APIs, JSON data parsing, FastAPI, Flask

Databases: MySQL, SQLite, PostgreSQL, MongoDB (NoSQL)

Data & Automation: File automation, Report generation, Pandas, Matplotlib, OpenPyXL

Tools & Version Control: Git, GitHub, Docker, Postman, Linux, SolidWorks

EXPERIENCE

Redmoon

Software Developer (Backend & Automation)

Remote

Jan 2025 – Present

- Co-founded a student-led technology venture, designing a database-driven Inventory Management System for a local business and successfully securing a commercial contract (6,000).
- Built the backend utilizing **Python** and integrated it with a cloud-based **MySQL (TiDB)** database for reliable data handling and querying.
- Automated internal reporting tasks by generating dynamic data insights based on date, product, and quantity, significantly reducing manual data entry errors by 90%.
- Created secure **REST APIs** and integrated SMTP email services to handle Role-Based Access Control (RBAC) and user authentication workflows.

Sapphire Research

Python Automation Developer

Remote

Jan 2025 – Present

- Collaborated within a peer-driven student startup to develop backend Python scripts supporting the automation of complex internal processes, including massive data scraping workflows.
- Utilized **Pandas** and NLP libraries for robust data parsing and cleansing of unstructured text.
- Engineered an automated file processing pipeline that successfully converted and managed 1,000+ audio files, heavily optimizing execution time using parallel scripting.

RELEVANT PROJECTS

Campus SOS System (National 2nd Place) | Python, FastAPI, MongoDB, Flutter

2025

- Developed the backend infrastructure for a secure Campus SOS mobile application using **FastAPI** to handle real-time emergency routing via **REST APIs**.
- Engineered database-driven modules using **MongoDB** with automated TTL (Time-To-Live) scripts to securely delete sensitive JSON payload data after 24 hours.
- Tested, debugged, and optimized the backend to ensure high reliability and zero-latency data transmission during critical use-cases.

Firmware Analysis Pipeline (SIH Finalist) | Python, SQLite, Docker, Data Visualization

2025

- Collaborated to build a high-performance Python application capable of parsing and analyzing large-scale binary datasets (25,000+ files).

- Maintained backend scripts to orchestrate headless execution and structured the extracted data into readable formats for analysis and reporting.
- Containerized the complete application environment using **Docker** to ensure cross-platform compatibility and ease of deployment.

PATENTS

Registered Design Patent (Govt. of India)

Design No: 476133-001

Soldier Rope Ascending Device with Ratchet Pawl System

Issued: Feb 2026

- Co-invented and secured a design patent for a specialized mechanical rope ascending device, showcasing core engineering and hardware design capabilities.

CERTIFICATIONS & COURSEWORK

Professional Certifications

Online

Relevant to Software Engineering & ML

2025

- Automation in Manufacturing (NPTEL, IIT Madras) – Highly relevant to automated systems.
- Google Machine Learning Crash Course & DeepLearning.AI Prompt Engineering.

LEADERSHIP & SOFT SKILLS

Technical Lead & Event Coordinator

MIT, Chennai

College Hackathons & Technical Events

2025

- Managed technical logistics and documentation for events with up to 300+ participants, demonstrating strong team collaboration and communication.
- Ensured zero downtime across platforms, coordinating efficiently with cross-functional student teams and adapting to high-pressure technical challenges.