Aditya Tayal

+91 90984 88077 | iitian.aditya@gmail.com | LinkedIn | GitHub

EDUCATION

Indian Institute of Technology Mandi — Mandi, Himachal Pradesh
Bachelor of Technology in Computer Science Engineering | CGPA: 8.95 — *Aug. 2023 – Present*

Ramakrishna Mission — Gwalior, Madhya Pradesh
Higher Secondary Education in PCM with Computer Science | 89.40% — *Aug. 2020 – June 2022*

Wendy School Junior College — Gwalior, Madhya Pradesh
ICSE Based Secondary Education | 98.20% — *Apr. 2007 – July 2020*

PROJECTS

Attendio: The Attendance Tracker Bot — Live Code
Python, Telegram Bot API, Firebase — *Mar 2025*
- Automated Attendance Tracking: Developed a Telegram bot using Python and asynchronous APIs.
- Real-Time Data Storage: Integrated with Firebase for real-time storage and Railway for backend hosting.
- Features: Real-time notifications, Excel export capabilities, and robust error handling.
- User Base: Actively used by 100+ students.

Faculty Application Portal – IIT Mandi — [Live on IIT Mandi Portal]
Django, SQL, HTML, CSS — *Dec 2024 – Feb 2025*
- Replaced outdated Google Forms with a secure, scalable, centralized web application for faculty recruitment.
- Built an automated resume management module that generates and emails application PDFs to candidates.
- Designed a powerful admin dashboard for filtering, application tracking & data export in CSV, PDF, Excel.
- Fully deployed on IIT Mandi's official recruitment portal, streamlining the complete faculty application workflow.

Budget Buddy: AI-Powered Financial Companion — Live Code
Gradio, Groq LLM, LangChain, Cohere, Pathway, Plotly — *April 2025*
- Real-time Finance Assistant: Tracks expenses and budgets via natural language queries.
- RAG Pipeline: Utilized vector DB & Fetch AI Autonomous Agent for instant financial query responses.
- Interactive Dashboards: Designed with Gradio and Plotly for detailed analytics and date-wise filtering.
- Security: Implemented JWT-based authentication with planned Google Sheets data sync.
- Deployment: Hosted on Streamlit Cloud.

Secure Scanner – Malware Detection Tool — Live Code
Python, FastAPI, YARA, React — *Feb 2025*
- Malware Detection: Developed a hackathon tool to analyze .exe, .pdf, and .docx files.
- Backend: Built with FastAPI to manage multiple concurrent scanning requests.
- Frontend: Created using React.js for an intuitive user interface.
- Deployment: Hosted on Render (backend) and Netlify (frontend).

Autonomous ROS Robot with ESP32 & Custom PCB Fundamentals of Design Practicum (IC-102P)
ESP32, ROS, Vector Algebra, PCB Design (easyEDA), Soldering — *Mar 2024 – May 2024*
- Designed and manufactured a custom 2-layer PCB (JLCPCB) with ESP32 NodeMCU and efficient power routing.
- Implemented vector-based motion planning logic using ROS; handled velocity and acceleration using vector algebra for autonomous path tracking involving turns & movement simultaneously.
- Integrated real-time motion control with the navigation stack; tuned system for precise turning & path correction.
- Collaborated in a team to deliver a successful hardware-software integration demo, earning strong faculty feedback.

TECHNICAL SKILLS

Languages: Python, JavaScript, C, C++, Java, Kotlin, SQL, HTML/CSS, R
Frameworks: React, Node.js, FastAPI, Flask, TensorFlow, PyTorch, Gradio
Tools: Git, Docker, TravisCI, VS Code, IntelliJ, PyCharm, Tableau, SOLIDWORKS, ROS
Cloud & Deployment: Railway, Render, Netlify, Firebase, Streamlit Cloud
Libraries: Pandas, NumPy, Matplotlib, Plotly