Aayush Mishra

2025

Portfolio | G-Mail | +91-8424966294 | Linked-In | Github

About

Embedded Robotics and Software Engineer with 1.5 years of experience in integrating **Robotics and Computer Science** principles to build innovative solutions and projects.

Education

MIT Manipal, Manipal *July 2023 – Present*
B.Tech - Mechatronics (Robotics and Automation)

- **Coursework:** Data Structures, Control Systems, Digital and Analog Design, Micro-Controller based System Design.

Experience

SCADA Trainee *Udupi*
Oil and Natural Gas Corporation *June 2025 – July 2025*

- Configured **HMI Interfaces** and Integrated **Field Instrumentation via PLCs using Modbus Protocol.**
- Gained exposure to **SCADA Architecture, Telemetry, and Industrial Communication Standards.**
- Monitored and Analysed Control of Upstream Operations using **SCADA System.**

Technical Skills

Programming: Python, C/C++, MATLAB, TypeScript

Technologies: Git/GitHub, VS-Code, Google Cloud Console, Keil uVision, Arduino IDE, Jupyter Notebook.

Design and Modeling:

1) PCB Design (EasyEDA)

2) CAD Modeling (Fusion 360, Solidworks)

Front-End Development: HTML/CSS, JavaScript, Next.js, React Native.
Back-End Development: Supabase(PostgreSQL), JWT Auth, API/SDK Integration, REST API.

Projects

Image-to-Text Extractor and Translator *Live Link*

- Uses image uploaded by user to - **extract text from the image and translate it** into any language for user's convenience.
- Tools Used: Google Cloud Vision API, TypeScript, Tailwind CSS, Google Translation API, Next.js

HackTracker - Hackathon Tracking Website *Live Link*

- Allows the user to **track their upcoming, registered, and completed hackathons**, and also add/delete any hackathon user wants to keep in the website.
- Users can **safely sign-in/sign-up** and also **track their submission progress for various hackathons via the website**.
- The website uses a **custom-built API key to fetch/scrape data from different websites** which post about hackathons (e.g. Unstop/Hack2Skill/Devpost, etc.).
- Tools Used: JavaScript, Node.js, Express.js, OAuth, CSS, Next.js, TypeScript

Automatic Motion Detection System using PLC *GitHub Link*

- Engineered a Sensor-Based Automated Motion Detection system using **Bosch Rexroth PLC, Arduino Mega 2560, Ultrasonic Sensors, Buck and Boost Converters,** with **Breadboard and PCB Design in Fritzing and Simulation in Proteus**.
- Tools Used: C++, Arduino IDE, Proteus.

PI and PID Controller Designs for Control Systems *GitHub Link*

- Designed and Tuned PI and PID Controllers for a linear dynamic system **using Root Locus and Bode Analysis to optimize stability and performance** with the help of Control System Toolbox Add-On.
- Tools Used: MATLAB