

# Md Shaiqin Mumtaz

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## TECHNICAL SKILLS

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**Robotics & IoT:** Embedded Electronics, Microcontrollers (ESP32, Arduino), Raspberry Pi 5, Actuators, Servo Motors, Rocker-Bogie Systems, Sensor Fusion

**Languages & CLI:** Python, JavaScript, SQL (PostgreSQL, MySQL), PHP, HTML/CSS, Command Line (CLI) Tools

**Frameworks & AI:** Django, Flask, FastAPI, Node.js, React, Agentic Coding Tools, OpenCV, WebGIS

**Tools & Libraries:** Git/GitHub, n8n Workflow Automation, Supabase, pandas, NumPy, Scikit-learn

## EDUCATION

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### Asansol Engineering College

*B.Tech in Computer Science and Engineering (IoT, Cybersecurity & Blockchain Technology)*

West Bengal, India

Jul 2023 – Jun 2026

### IIT Mandi

*Minor in CSE and Advanced Technologies*

Himachal Pradesh, India

Sep 2024 – Oct 2025

### Asansol Institute Of Engineering And Management - Polytechnic

*Diploma in Computer Science and Technology*

West Bengal, India

Jul 2020 – Jun 2023

## PROJECTS

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### Sentinel-R-V4 | *Raspberry Pi 5, Arduino, CLI, Python*

[Link](#)

- Engineered a master-slave architecture with a Raspberry Pi 5 hub for encrypted global telemetry tunneling alongside localized Arduino-driven CLI command setups.
- Configured BTS7960 43A motor drivers on Rocker-Bogie suspensions matched with a dual-stream 180° vision feed and a multi-module sensor fusion suite (GPS, gas, ultrasonic).

### VAYU-SETU: Underground Mining IoT Network | *LoRa, ESP-NOW, Embedded IoT, Telemetry*

[Link](#)

- Developed VAYU-SETU, a hybrid LoRa/ESP-NOW decentralized IoT mesh network integrating real-time hazard monitoring, a forensic Blackbox, and haptic smart helmet alert systems.
- Earned 3rd Place honors nationally during the technical showcase challenge organized by the IEST Shibpur Mining Technology Committee (Initium 11.0)

### GeoAdhikar (SIH 2025) | *WebGIS, OCR/NER, Python, Satellite Imagery*

[Link](#)

- Ranked 7th nationally out of thousands of submissions for building an AI-powered FRA Atlas and Decision Support System (DSS) to automate and support regional land-claim governance.
- Fabricated automated OCR and NER processing engines to index legacy state document metadata for real-time WebGIS mapping across PMAY-G, PM-KISAN, JJM, and PMMVY schemes.

### TATA Healthcare Multi-Tenant Portal | *Django, Flask, PostgreSQL, MySQL, JavaScript*

[Link](#)

- Designed and delivered a secure multi-tenant healthcare web application servicing over 500+ users with strict dynamic dashboard Role-Based Access Control (RBAC) authorizations.
- Optimized backend SQL database queries with explicit indexing schemas and transaction-safe Django logic, lowering dynamic server dashboard latency below 200ms under concurrent workloads. [More Projects Link](#)

## EXPERIENCE

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### TATA Power

*Full Stack Developer Intern*

Remote

Oct 2025 – Nov 2025

- Developed a **Django 5.0 + MySQL appointment booking platform** with **Admin, Doctor, and Patient/Employee dashboards**, enabling automated scheduling.
- Improved security and reliability using **RBAC, booking collision prevention, and analytics reporting**, ensuring a stable production-ready deployment.

## CERTIFICATIONS AWARDS

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**Certifications:** Aspire Leaders Program, Prompt Engineering, IoT, LinkedIn Workshop, Startup School, Data Analytics, Network Systems and Architecture, Generative AI & more

**Awards:** **1st Runner-up** (IHMMC 2026), **7th Rank Nationally** (SIH 2025), **3rd Place** (IEST Shibpur Mining Tech Competition), **1st Place** (AIEMP Innotech), **Portfolio Winner** (AEC Hardware Club).