

TUSHAR SINGH AKHAWAT

Backend Developer | Full Stack (MERN) Developer | Python Developer | AI & IoT Engineer

Beawar, Rajasthan, India

+91-7976416507 | akhawattushar@gmail.com | LinkedIn | GitHub | Portfolio

PROFESSIONAL SUMMARY

Backend and Full Stack Developer (Node.js, Python, MongoDB, React.js) with hands-on internship experience building REST APIs, AI-powered workflows and MCP integrations for production applications. Deployed services with Docker, AWS and Vercel, and built end-to-end Flask, FastAPI and ESP32 + MQTT systems, including a machine learning fault-detection project presented at the Smart India Hackathon (SIH) 2025 national round.

TECHNICAL SKILLS

Programming: Python, JavaScript, SQL, C

Backend: Node.js, Express.js, Flask, FastAPI, REST APIs, API Automation, API Testing

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

Database: MongoDB, SQL, Vector Databases

AI & Data: RAG Systems, LLM APIs, MCP Workflows, Scikit-learn, Machine Learning

Cloud & DevOps: AWS, Docker, Vercel, ngrok

IoT: ESP32, MQTT, ThingsBoard, Sensor Integration

Tools & Design: Git, GitHub, Postman, Figma, Unity

EXPERIENCE

Neeyat AI

Mar 2026 – Aug 2026

Tech Intern – Backend, APIs & AI Workflows

Remote

- Built scalable backend systems and REST APIs for production applications using Node.js, Python and MongoDB.
- Automated internal tools and services by building AI-powered workflows, MCP integrations and API automation pipelines.
- Connected backend services to web and mobile applications and added dynamic API testing and validation features.
- Cut API failures and performance bottlenecks by optimizing request handling and data flow, improving response times.
- Streamlined testing and deployment across multiple environments using Postman, Docker, AWS, Vercel and ngrok.

PROJECTS

EcoVisionPro – Real-Time Solar Monitoring System | Flask, ESP32, MQTT, ThingsBoard, React 2025

- Built an IoT solar monitoring system that streams live ESP32 sensor data over MQTT to ThingsBoard for real-time visualization.
- Developed Flask REST APIs and an end-to-end sensor-to-cloud pipeline, with a React dashboard deployed on Vercel.

IntelliWork AI – Predictive Maintenance | Python, Flask, ESP32, Scikit-learn

2025

- Built a machine learning fault-detection model with a Random Forest classifier on real-time ESP32 data acquisition.
- Developed a Flask REST API for model inference and visualization; presented at the SIH 2025 national round.

UrjaShakti 2026 – Official RGIPT Hackathon Website | HTML, CSS, JavaScript

2026

- Built the official website for RGIPT's national women's energy hackathon from scratch using HTML, CSS and JavaScript.
- Delivered a site adopted and deployed by the institute on its official domain at rgipt.ac.in/urjashakti26.

ME-Factory – Paper Cup Factory Management Tool | HTML, JavaScript

2026

- Built a web tool that digitizes paper cup production workflows, simplifying daily task tracking for factory workers.
- Reduced manual effort and errors on the factory floor by replacing manual task tracking with the tool.

EDUCATION

Rajiv Gandhi Institute of Petroleum Technology (RGIPT)

2024 – 2028

B.Tech Chemical Engineering (Renewable Energy Major)

Jais, Uttar Pradesh

CERTIFICATIONS

Tech Internship – Neeyat AI (2026)

Python Workshop – IIT Bombay AZeotropy 2025 | MATLAB Workshop – IIT Bombay AZeotropy 2025

ACHIEVEMENTS

- Presented IntelliWork AI (ML predictive maintenance with ESP32) at the Smart India Hackathon (SIH) 2025 national round.
- Built the UrjaShakti 2026 website, adopted and deployed by RGIPT on its official domain.