Soumik Roy

Technical Skills

Languages: Java, Python, JavaScript, SQL

Databases: MySQL, MongoDB

Libraries/Frameworks: NumPy, Pandas, Scikit-learn, TensorFlow, PyTorch, Hugging Face, OpenCV, MediaPipe

Visualization: Power BI, Tableau, Matplotlib, Seaborn

Tools & Platforms: Git, GitHub, REST APIs, Vercel, Docker, AWS, Prompt Engineering

Experience

AI Developer Intern – EnerQuest Solutions (Remote)

Jul 2025 - Sep 2025

- Developed an AI chatbot with **intent recognition** and **context management** using Python (NLTK, Scikit-learn), achieving 20% improvement in query accuracy.
- Integrated REST APIs to enhance user interaction and optimized dialogue flow, reducing response latency by 15%.

Web Developer Intern - Pratigya NGO (Remote)

Jun 2023 - Jul 2023

- Designed and implemented responsive web pages improving **UI/UX accessibility** for NGO's official website, reaching 5,000+ visitors.
- Enhanced digital presence by delivering SEO-friendly and mobile-optimized solutions, supporting NGO's education mission.

Projects

Divya-Drishti – AI-Powered Assistive Platform | Next.js, YOLOv5, Twilio API, OpenCage API

GitHub

- Engineered an AI platform supporting visually impaired and deaf-mute users through **real-time obstacle detection** and **sign language recognition** using computer vision and deep learning.
- Implemented ML pipelines with YOLOv5 for object detection, TensorFlow for gesture recognition, and integrated OpenCage + Twilio APIs for geospatial alerts and emergency support.

Hasth-Akshar – Devanagari Sign Language Detection | MediaPipe, OpenCV, TensorFlow

GitHub

- Built a real-time Hindi sign language detection system using **pose estimation**, **NLP**, **and deep learning**, transcribing gestures into Hindi text.
- Developed custom datasets, applied preprocessing and feature extraction, and optimized model performance achieving high recognition accuracy.

Achievements

- 1st Runner-Up Zelestra X AWS ML Ascend Challenge (Aug 2025): Ranked top 50 out of 1500+ teams in a nationwide ML competition, building a solar panel optimization model.
- Finalist CodeClash Hackathon (May 2025): Selected among 700+ teams for developing Divya-Drishti, an AI accessibility platform.

Leadership & Extracurriculars

- Founded and led **Eureka Club** at VIT Bhopal A 100+ member research-driven AI/ML club supporting innovation and faculty research collaborations.
- Core Technical Team Member IoT Club, VIT Bhopal, contributing to projects and website development.

Education

B.Tech in Computer Science and Engineering

Sep 2022 - Ongoing

VIT Bhopal University

CGPA: 8.88

• Relevant Coursework: Data Structures & Algorithms, Database Management Systems, Machine Learning, Deep Learning, Cloud Computing, Software Engineering