

Soumyashis Sarkar

Bhopal, Madhya Pradesh

8369994800 | soumyashissarkar362@gmail.com

LinkedIn: <https://www.linkedin.com/in/soumyashis-sarkar/> | GitHub: <https://github.com/Chitragupta16>

Education

VIT Bhopal University

Bachelor of Technology in Computer Science and Engineering

Bhopal, MP

Oct 2022 – Aug 2026

- CGPA: 8.46/10.0

Work Experience

Machine Learning Intern

July 2024 – Apr 2025

Omdena

Remote

- Led team of 5 members in Bhopal BRTS chatbot development, collected 300+ route data points using web scraping and manual methods, deployed Streamlit web application
- Implemented geospatial routing algorithms using Haversine formula and OSRM API integration, built RAG pipeline with LangChain and Gemini API for dynamic query responses
- Collaborated with 15+ international engineers via Slack and Google Colab across Frankfurt green space mapping using Sentinel-2 satellite imagery and VM-UNet architecture

Projects

Interactive Graph Algorithm Visualizer | JavaScript, HTML5 Canvas, CSS, Data Structures & Algorithms Aug 2024

- Built interactive web application visualizing 7 graph algorithms including BFS, DFS, Dijkstra's, A*, Bellman-Ford, Prim's, and Kruskal's algorithms
- Implemented real-time step-by-step algorithm execution with custom graph input using adjacency list format and speed control features
- Developed responsive UI with HTML5 Canvas rendering, pause/reset controls, and dynamic node highlighting for educational visualization

Player Re-Identification in Soccer Matches | Python, YOLOv11, OpenCV, Deep SORT, PyTorch

Jun 2024

- Developed player detection and tracking pipeline using YOLOv11 for bounding box detection and Deep SORT for consistent ID assignment
- Implemented re-identification logic to maintain player identities across occlusions and overlapping frames in real-time video feeds
- Simulated match scenarios ensuring accurate tracking for analytics, with robust handling of ball-player interactions

Urban Green Space Mapping using VM-UNet | Python, PyTorch, CUDA, OpenCV, Docker Dec 2024 – Mar 2025

- Adapted VM-UNet architecture from medical to geospatial applications for multi-channel Sentinel-2 satellite imagery segmentation
- Implemented data augmentation techniques improving model performance: F1-score increased to 82%, accuracy to 77.4%, specificity to 77.9%
- Built training pipeline using PyTorch with CUDA optimization, deployed on Google Colab with containerized environment setup

Technical Skills

Programming Languages: Python, Java, SQL, JavaScript

Framework: PyTorch, TensorFlow, Node.js

Development Tools: Git, VS Code, Kaggle, AWS, Docker

Extracurriculars

- Finalist at Smart India Hackathon 2024 with gamified Indian Consitution educational platform
- PR & Outreach Member at AI Club, VIT Bhopal
- Team Lead, Freelancing Club, VIT Bhopal