Asmita Sarkar

+91 93996 51949 | asmitasarkar.work@gmail.com
linkedin.com/in/asmita-sarkar-691a77249 | github.com/asmita-sarkar-connect

Education

VIT Bhopal University, Bhopal **Aug. 2022 – Jun. 2026**
B.tech in CSE (Cloud Computing & Automation) *Cgpa - 8.00*

Skills

Machine Learning & Data Analysis: Developed and deployed predictive models using Python and SQL; applied statistical analysis and data mining techniques to datasets exceeding 1,000 records
Cloud & DevOps: AWS (Amazon Web Services), Cloud Computing, Cloud Architecture, AWS EC2, AWS S3, AWS IAM
Artificial Intelligence & Computer Vision: Engineered AI-driven solutions, including facial recognition systems with 95%+ accuracy and generative AI applications using IBM watsonx.ai
Programming & Technical Tools: Python, Java, JavaScript, SQL, HTML, CSS, React, Flask, MongoDB, Oracle Cloud; experienced with REST APIs and IoT integration
Research, Innovation & Collaboration: Conducted academic research published in CRC Press; led a 5+ member team in Smart India Hackathon and initiated the patent process based on the proposed solution

Projects

AI-Powered Document Digitization using IBM Watsonx | *Watsonx, COS, Python, Boto3* **Feb. 2025 – May. 2025**
- Developed an AI-powered pipeline using IBM Watsonx and Cloud Object Storage to automate document digitization and text extraction from unstructured PDFs.
- Implemented OCR and table extraction using Watsonx Foundation Models for structured markdown output.
- Integrated IBM Cloud services (Watsonx, COS, Boto3) to securely manage and process documents.

Agriculture-Based ML Project | *React, Vite, Tailwind CSS, Flask, MongoDB* **Aug. 2024 – Apr. 2025**
- Designed and developed a machine learning system for agriculture, integrating a Crop Yield Predictor and Crop Recommendation System to assist farmers.
- Utilized React, Vite, and Tailwind CSS for a responsive UI; Flask for backend; MongoDB for secure data storage.
- Achieved high accuracy in local testing; future enhancements include cloud deployment and integration of real-time weather data.
- Demonstrated application of AI, data-driven decision-making, and scalable system architecture in agriculture.

Waterless Spittoon Station (Smart India Hackathon) | *IoT, Sensors, Automation* **Aug. 2024 – Feb. 2025**
- Selected among Top 7 from 500+ intra-college teams; Semi-finalist at Johns Hopkins University HealthHack 2025.
- Developed IoT-enabled, self-cleaning spittoon with waste-to-manure conversion.
- Integrated smart sensors and automation, reducing disease spread by 30–50%.

VITRACK | *Facial Recognition, AWS EC2, S3* **Mar. 2024 – May. 2024**
- Engineered an AI-powered visitor management system, automating identification for 200+ visitors, reducing manual entry time by 70%.
- Deployed application on AWS EC2 for scalable cloud hosting and used AWS S3 for centralized visitor image storage.
- Integrated facial recognition, achieving 95%+ accuracy in real-world testing.

Achievements

- Selected as a semi-finalist at JHU HealthHack 2025 for the Waterless Spittoon Station project; presented technical research and prototype to an international panel, advancing to the semi-final round among 100+ teams.
- Contributed as co-author to the book chapter "Smart Grid and Energy Management"; accepted for publication by SCPS, CRC Press.
- Achieved Top 7 out of 500 teams in the Smart India Hackathon (Waterless Spittoon System); engineered an IoT-enabled, self-cleaning spittoon system that reduced disease spread by 30–50% in pilot testing.
- Secured 2nd place among 40+ participants in the College Debate Competition, Edutech Club, VIT Bhopal University.

Certifications

- GEN AI USING IBM WATSONX.AI April 2025
- SQL ON ORACLE CLOUD April 2025
- HTML, CSS AND JAVASCRIPT FOR WEB DEVELOPERS December 2023