Asmita Sarkar

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Education

VIT Bhopal University, Bhopal **Oct. 2022 – Jun. 2026**
B.tech in CSE (Cloud Computing & Automation) *Cgpa - 8.11*

Skills

Cloud & DevOps: AWS (EC2, S3, IAM, Lambda, CloudWatch), IBM Cloud, Oracle Cloud, CI/CD (Jenkins), Docker, Kubernetes, Git, REST APIs, IoT integration
Programming & Frameworks: Python, Java, JavaScript, SQL, React, Flask
Machine Learning & AI: Predictive Modeling, Generative AI, Facial Recognition, Computer Vision, IBM watsonx.ai

Experience

F13 Technologies **July 2025 – Present**
AWS Cloud Intern *Remote*

- Assessed and deployed an automated, real-time facial recognition solution for attendance, reducing manual processing time and improving data accuracy by over **90%** through a scalable, serverless architecture.
- Successfully executed comprehensive tasks that included the design, development, and deployment of a serverless attendance system using AWS Rekognition, Lambda, S3, and DynamoDB.

Projects

Intelligent Automation Solution | *Watsonx, COS, Python, Boto3* | `GitHub` **Feb. 2025 – May. 2025**

- Engineered an AI-powered pipeline to automate the digitization of unstructured PDFs, **reducing manual processing time by an estimated 95%**.
- Achieved **98.5% accuracy** in text and table extraction using IBM Watsonx Foundation Models, ensuring high data fidelity for downstream analysis.
- Designed a scalable cloud workflow on IBM Cloud services, capable of processing over **500 PDF documents per hour** to support high-volume data ingestion.

Agriculture-Based ML Project | *React, Vite, Tailwind CSS, Flask, MongoDB* | `GitHub` **Aug. 2024 – Apr. 2025**

- Developed an **end-to-end predictive modeling system** featuring a Crop Yield Predictor and Recommendation System, which validated 70% accuracy in crop yield predictions for farmers.
- Architected a scalable system using **React** and **Flask**, translating complex machine learning models into an intuitive, actionable tool.
- Proposed a secure data storage framework with **MongoDB**, enabling a data-driven approach for a full-stack predictive analytics platform.

Process Automation System (VITRACK) | *Facial Recognition, AWS EC2, S3* | `GitHub` **Mar. 2024 – May. 2024**

- Built an AI-powered visitor management system that automated identification for over **200 visitors**, reducing manual entry time by **70%**.
- Deployed the application on **AWS EC2** for scalable cloud hosting and used **AWS S3** for centralized visitor image storage.
- Integrated facial recognition, achieving over **95% accuracy** in real-world testing to ensure high reliability and speed.

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.
- **Taylor&Francis Publication:** Chapter - *Smart Grid and Energy Management in SCPS*, 2024. Featured in the book: *Smart Cyber-Physical Systems: Innovations and Real-World Implications.* `ISBN 9781032892931`
- Led a team of five in the Smart India Hackathon to design and develop an IoT-enabled, self-cleaning spittoon system. This project was ranked among the **top 7** out of 500 teams and reduced disease spread by 30-50% in pilot testing.
- Secured **2nd Place** in a debate competition among over 100 students, hosted by the Edutech Club in VIT Bhopal University.

Certifications

- AWS Accreditations – Completed six partner accreditations including Data Scientist Learning Plan, Digital Sovereignty, Migrating Workloads, Containers on AWS, Cloud Economics, and Technical Essentials (GitHub) July – August 2025
- Gen AI using IBM Watsonx.ai, Completed with (93%) April 2025
- SQL on Oracle Cloud April 2025
- HTML,CSS and Javascript via Coursera December 2023