

ASMITA SARKAR

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Education

Vellore Institute of Technology

B.tech in CSE (*Cloud Computing & Automation*)

Oct. 2022 – Jun. 2026

Cgpa - 8.13

Skills

Cloud & DevOps: AWS (EC2, S3, IAM, Lambda, CloudWatch), IBM Cloud, Oracle Cloud, CI/CD , Docker, Kubernetes, Git, REST APIs, IoT integration

Programming & Frameworks: Python, Java, JavaScript, SQL, React, Flask

AI & Machine Learning : Predictive Modeling, Generative AI, Facial Recognition, Computer Vision, IBM watsonx.ai

Experience

F13 Technologies

July 2025 – Oct 2025

AWS Cloud Intern

Remote

- Assessed, launched, and troubleshooted an automated, real-time facial recognition solution, improving data accuracy by over 90% through a scalable, serverless architecture.
- Architected, developed, and integrated a robust serverless attendance system using **AWS Rekognition, Lambda, S3, and DynamoDB**, resulting in a highly reliable solution.

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, effectively eliminating the need for manual processing.
- 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

- Engineered a scalable visitor management system and **deployed it on AWS EC2 for cloud hosting**, demonstrating proficiency in **network deployment** and **cloud infrastructure management**.
- Implemented **robust cloud architecture on AWS**, leveraging EC2 and S3 for scalable hosting and storage, which ensured **high reliability and speed** for a high-volume application.
- Integrated facial recognition, achieving over **95% accuracy** in real-world testing to ensure high reliability and speed.

Achievements

- Selected as a semi-finalist at the JHU HealthHack 2025 for the Waterless Spittoon Station project, advancing to the semi-final round among over 100 teams and presenting technical research to an international panel
- 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
- Spearheaded an IoT-enabled, self-cleaning spittoon system at the Smart India Hackathon, ranking among the top 7 of 500 teams and **reducing disease spread by 30-50%** in pilot testing

Certifications

- Certified Multicloud Architect Professional by Oracle Oct 2025
- Certified AI Foundations Associate by Oracle Oct 2025
- 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 – Aug 2025
- Gen AI using IBM Watsonx.ai April 2025
- SQL on Oracle Cloud April 2025