

SHREEMANTO LAHIRI

+91 8050328378 • shreemantolahiri@gmail.com

shreemanto.dev • linkedin.com/in/shreemanto • github.com/shreemantolahiri

EDUCATION

Vellore Institute of Technology, Vellore

B.Tech. in Information Technology

Aug 2021 – Jul 2025

CGPA: **9.53/10**

EXPERIENCE

Software Engineer - Okta

Jan 2025 – Present

- Built **Infra AI**, an internal AI platform integrating infrastructure systems, operational knowledge, and production tooling, enabling engineers to investigate production issues through contextual infrastructure search across **22+ AWS production environments**.
- Developed production AI agents using **Amazon AgentCore**, integrating MCP servers for **Spinnaker, AWS, Kubernetes, Terraform, Grafana, Datadog, and PagerDuty** to enable contextual infrastructure search and analysis.
- Engineered an AI-driven Terraform plan intelligence service using **AWS Bedrock**, leveraging semantic chunking and hierarchical summarization to generate deployment summaries and risk assessments, scaling to process **1,000+ release trains/day** with Terraform plans containing **tens of thousands of resource changes**.
- Built **The Guardian**, an internal agentic AIOps assistant integrating Slack, Confluence, Amazon Kendra, and platform services to provide contextual incident assistance for on-call engineers.
- Scaled Infra AI from **50 to 1,000+ users** by implementing conversational memory, session management, and UX improvements, driving adoption across engineering teams.
- Migrated the AI agent infrastructure from **AWS Lambda + ALB** to **Amazon AgentCore Runtime and Agent Gateway**, simplifying MCP deployment while improving platform scalability and maintainability.
- Reduced infrastructure drift by **70%** across **18+ AWS production cells** by designing and deploying a distributed Go-based cloud-agnostic drift detection service integrating Terraform state and cloud metadata.
- Architected a scalable Spinnaker orchestration framework that improved deployment throughput by **4× (8 hrs → 2 hrs)** by coordinating thousands of concurrent pipeline executions.
- Owned and maintained **5+ business-critical platform services** supporting deployment orchestration, infrastructure automation, and SRE workflows across **18+ production environments**.

Software Development Engineer Intern - Samsung R&D India

Oct 2023 – Mar 2024

- Improved astrophotography image quality by **35%** using CLAHE and adaptive ML-based tuning while reducing image processing pipeline memory usage by **40%**.

Summer Intern - Carl Zeiss India

Aug 2023 – Oct 2023

- Developed Python ETL pipelines processing **10k+ multi-region records** and automated KPI dashboard generation, reducing manual reporting effort by **30%**.

PROJECTS

Online Multiplayer Chess *Node.js, Express, Socket.io, Chess.js*

[GitHub](#) — [Live](#)

Built a real-time multiplayer chess platform using WebSockets (Socket.io), supporting synchronized game play and concurrent game session management.

SKILLS

Languages: Go, Python, Java, C++, SQL, JavaScript

Backend Engineering: REST APIs, Microservices, Distributed Systems, Node.js

AI Platform: Amazon AgentCore, AWS Bedrock, Model Context Protocol (MCP), AI Agents, LLM Integration

Cloud & Infrastructure: AWS, Kubernetes, Terraform, Docker, CI/CD, Spinnaker, Git, GitHub Actions

Databases & Observability: PostgreSQL, MySQL, MongoDB, Firebase, Grafana, Prometheus

CERTIFICATIONS

- AWS Certified Cloud Practitioner

ACHIEVEMENTS

- Ranked Top 10 (CGPA 9.53/10) among 800+ students at VIT.
- Two-time Hackathon Finalist; winning solution deployed internally at Okta.
- IEEE-PES Management Head, leading 150+ members.