Akhil Nalamala

Boston, MA
hi@aknm.dev

WORK EXPERIENCE

Plex Labs (Hyderabad, India) *April 2024 - Jan 2026*
Software Engineer

- Engineered backend infrastructure services and **REST** APIs in **Python** powering autonomous provisioning workflows across AWS and Azure with **sub-second** response times.
- Built performance-optimized Model Context Protocol (MCP) server using **PostgreSQL**, **MongoDB**, and **Redis** caching, enabling real-time LLM agent context retrieval with reduced latency and improved throughput.
- Developed a **React** and **TypeScript** chat interface enabling natural language cloud operations, integrating with **Python**-based backend agents for real-time AWS provisioning with streaming, stateful interactions.
- Architected a secure cross-account **AWS IAM** authentication framework utilizing role assumption and external IDs, enabling the agent to safely manage client environments without credential exposure.

Omnicell Inc. (Cranberry Township, PA) *November 2021 - December 2023*
Software Engineer I

- Contributed to enterprise microservices migration from legacy to multi-tenant architecture, updating and deploying **C#** and **Java** services on **Kubernetes/AWS**, resulting in a **35%** increase in resource efficiency.
- Developed scalable backend services for healthcare automation workflows, optimizing **PostgreSQL** performance through index analysis and query profiling to maintain **99.9%** system uptime.
- Implemented granular Permissions-Based Access Control **(PBAC)** system replacing legacy Role-Based Access Control **(RBAC)**, working with **Azure DevOps** and automated deployment processes to enhance distributed system security.
- Engineered an **Angular**-based enterprise UI for pharmacy inventory management, supporting high-reliability operational actions and improving frontend test coverage to **90%** using **Jasmine** and **Karma**.
- Performed **on-call** engineering operations for our pharmacy inventory service, pinpointing and resolving production incidents across high-throughput microservices using monitoring tooling.

EDUCATION

George Mason University (Fairfax, Virginia, US) *August 2019 - May 2021*
Master of Science in Computer Science

GPA: **3.5/4.0**

Gandhi Institute of Technology and Management (Visakhapatnam) *July 2014 - April 2018*
Bachelor of Technology in Computer Science

SKILLS

Languages	C#, Go, Python, Java, TypeScript, JavaScript
Frameworks	React, Angular, Node.js
Databases	MongoDB, SQL Server, PostgreSQL, Redis, KeyDB
Cloud	AWS, Azure, Kubernetes, Docker, Prometheus, Grafana, DataDog
CI/CD	Codefresh, GitHub Actions, Octopus Deploy
AI Tools	Claude Code, Cursor, Codex, Google Stitch