

# Lakshman Siva

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## EDUCATION

### Northeastern University | GPA – 3.9

Master of Science in Information Systems

Expected Aug. 2026

Boston, MA

### Anna University | GPA – 3.64

Bachelor of Technology in Information Technology

May 2023

Chennai, TN

## EXPERIENCE

### Software Engineer Co-op

Origin AI · TruShield & AI Engine

July 2025 – Jan. 2026

Rockville, MD (Remote)

- Spearheaded the migration to an asynchronous **Redis** and **BullMQ** architecture to handle background jobs, achieving **99.9% reliability** and driving a **20% increase in adoption** by unlocking new revenue-generating capabilities.
- Engineered a critical feature for an internal analytics platform that automated a complex API call with **15+** parameters, **reducing execution time** for the research team from **20 minutes** via terminal to **under 5 seconds** via UI.
- Rebuilt the entire export engine to **optimize** performance, offloading processing to **background worker nodes** to resolve crashes and handle **4GB+ datasets** on just **128MB memory** using **Node.js streams**.
- Developed and launched an **automated daily export feature**, archiving **24 hours** of critical sensor data to **S3** and providing a consistent, reliable dataset for training core AI/MIL models.
- Served as the **primary owner and lead developer** of a crucial internal tool using **Next.js**, **Chakra UI**, **RESTful APIs** and **AWS**, collaborating directly with cross-functional AI and embedded teams to define features and resolve bugs.

### Member Technical Staff

Jan. 2023 – Aug. 2024

Chennai, TN

Zoho Corporation · ITSM SaaS Product (ServiceDesk Plus)

- **Responsible for core redesign** and implementation of User Defined Field support in the Asset module, enabling 10+ field types and up to 100 fields per product type, driving configurability and adoption among **1,000+ enterprise clients**.
- Cut manual filtering effort by **60%** with a custom asset-view feature supporting one-click filter reloads, built using **Java**, **AJAX**, and modular **vanilla JS**.
- Delivered an **EOSL tracking system** for a major banking client and automated its data population for **8K+** assets with a **Python** script, eliminating manual entry and security risks, which led to a successful **3-week delivery** and a global feature rollout.
- Eliminated tedious manual test data entry by building a CLI tool with **Python** and **Faker** that populates **500 form fields** with synthetic data in seconds, saving each developer **~30 minutes daily** and streamlining CI workflows.
- Resolved **250+** support tickets by building a reusable SQL query library, **reducing resolution time by 50%** and improving SLA adherence and customer satisfaction.

## OPEN-SOURCE PROJECTS

### Code2Cloud – PaaS Platform | ([GitHub Repo](#))

- Architected a production-grade **Platform-as-a-Service (PaaS)** that replicates **Vercel's core deployment engine**, enabling developers to **automatically build and deploy** full-stack applications directly from **GitHub**.
- Engineered a **distributed build pipeline** that **dynamically containerizes** applications in **isolated Docker environments**, while routing traffic via a **custom reverse proxy** backed by **AWS S3** for sub-second availability.

### NextPath – Graph Algorithm Visualizer | ([GitHub Repo](#)) | ([Demo](#))

- Designed and developed a **graph algorithm visualizer** using **Next.js** and **React Flow** to demonstrate **BFS**, **DFS**, **A\*** and **Dijkstra's** through real-time, step-by-step animations and adjustable speed control.
- Improved rendering performance by **70%** by resolving full-state re-render bottlenecks using **Zustand** for state management.

### CI/CD Pipeline for Cloud-Native Image Upload API | ([GitHub Repo](#))

- Built a **secure image upload API** with Node.js/Express, AWS S3, and PostgreSQL (RDS), achieving **99.9% uptime** and handling auto-scaled traffic from **5K** users via **ALB** and **EC2**.
- Automated **production-grade infrastructure** on AWS and GCP using **Terraform** and CI/CD pipelines, reducing deployment time by **25%** with **zero downtime**.

## SKILLS

Programming: Java, Go, Python, JavaScript (ES6), TypeScript

Full-Stack: Next.js, Node.js, Spring Boot, FastAPI, GraphQL

Database: PostgreSQL, MySQL, Redis, MongoDB

DevOps: AWS, GCP, Terraform, Jenkins, Kubernetes, GitOps

## LEADERSHIP & ACHIEVEMENTS

- Coordinator, **AWS X Huskies Cloud Club**: Led technical workshops and mentorship programs for students
- Lead Organizer, **GeekITrix**: Organized a live HackerRank coding challenge for 100+ participants
- National Finalist at Smart India Hackathon (**SIH**) 2022; solved **400+** DSA challenges on **LeetCode**