Laxmi Deeksha Vempati

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EDUCATION

Northeastern University   **Boston, MA, USA**

Master's in Information Systems   ***December 2025***

PROFESSIONAL EXPERIENCE

Software Engineer Co-Op | Philips North America   January 2025 - Present
- Developed distributed C# .NET Core microservices handling 1,000+ real-time messages daily via NATS, improving fault tolerance and system reliability.
- Built automated CI/CD pipelines using GitHub Actions, Docker, and Kubernetes, reducing deployment and test times by 50%.
- Created BDD-style component tests using Gherkin and MockServer to validate secure audit message forwarding, boosting test coverage by 35%.
- Executed performance tests (5,000+ msg/sec), optimizing throughput and reducing latency by 15% in large-scale systems.
- Participated in code reviews and applied object-oriented programming principles to improve system design and maintainability

Software Engineer | Science Utsav   June 2022 - July 2023
- Led development of a web platform used by 1,000+ users/month, enhancing UX and reducing registration time by 40%.
- Enhanced backend performance by 35% through optimized SQL queries, indexing, and caching in MySQL.
- Led a team using Agile and Git, improved code quality via structured code reviews, and reduced bugs post-deployment by 20%.
- Improved backend performance by 35% by optimizing SQL queries and caching strategies, accelerating page loads and data retrieval. Decreased post-deployment bugs by 20% through structured code reviews and enhanced unit testing, increasing platform stability.

PROJECT EXPERIENCE

Cloud Native Application   May 2024 - August 2024
- Optimized cloud infrastructure costs by 20% through scalable VM provisioning and dynamic resource management in AWS and GCP environments.
- Designed scalable, distributed infrastructure across 3 VPCs with firewalls, subnets, load balancers, and auto-scalers using Terraform on AWS and GCP.
- Automated CI/CD with GitHub Actions, Packer, and CloudWatch logging; integrated 5+ unit and integration tests, cutting deployment time by 60%.
- Built event-driven systems using Python and Pub/Sub for instant trigger processing, improving reliability and reducing latency.

Hospital Management System   September 2023 - December 2023
- Developed a multi-threaded Java-based system with object-oriented design patterns for seamless multi-organization data exchange.
- Built UI with Swing and ensured backend scalability, increasing service efficiency by 25%.

Audio to Sign Language Translator   January 2023 – August 2023
- Engineered a real -time speech to sign language translator using Python, NLP achieving 90% translation accuracy and increasing communication accessibility for hearing-impaired users by 60%.
- Developed a responsive web app with React.js, HTML, CSS and JavaScript enabling user friendly platform and exploding reach to 300+ users.

LEADERSHIP AND COMMUNITY ENGAGEMENT
- **Rewrite the Code –** Member
- **AnitaB.org –** Student Member
- **OASIS, Northeastern University** – Software Engineering Mentor

TECHNICAL SKILLS

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

Distributed Systems: NATS, Pub/Sub, Kubernetes, Docker, Consistency Models, Sharding, Load Balancing

Frameworks: .NET Core, React.js, Node.js, Express, Gherkin, Swing

Databases: PostgreSQL, MySQL, MongoDB

DevOps & Tools: Terraform, GitHub Actions, Helm, ArgoCD, Packer, Git, CloudWatch, MockServer

Concepts: Object-Oriented Programming, Algorithms, System Design, CI/CD, Testing & Monitoring