

SWETHA PATURU

☎ (857)313-2977 ✉ paturu.s@northeastern.edu 🔗 www.linkedin.com/in/swetha-paturu 🐙 github.com/swethapaturu9

EDUCATION

Northeastern University, Boston MA

Expected May 2024

Master of Science in Computer Software Engineering

Relevant Courses: Object Oriented Design, Data Structures & Algorithms, Networks & Cloud Computing

National Institute of Technology Warangal, India

May 2021

Bachelor of Technology in Computer Engineering

Technical Skills

Languages, Frameworks: Java, Python, C++, C, Spring Boot, React.js, Go, HTML/CSS, JavaScript
Database and Cloud: AWS(S3, EC2, Lambda), Linux, MySQL, MongoDB, DynamoDB, Redis, RabbitMQ
DevOps and Infra: Docker, Kubernetes, Jenkins, Terraform, Git, GitHub Actions, Helm, Packer, Pulumi
Certifications: Certified Kubernetes Application Developer (CKAD)

WORK EXPERIENCE

Larsen & Toubro Infotech Ltd.

July 2021 - July 2022

Software Engineer — Java, Spring Boot, React.js, RabbitMQ, Docker, Kubernetes

Hyderabad, India

Full-Stack Development

- Played a key role in migrating an internal technical interview platform from monolithic to **microservices** architecture in **Java Spring Boot**. This Reduced application downtime from 10 hours to just 2 hours per month for 15,000 users
- Automated the test grading system to generate personalized feedback reports, reducing manual grading efforts by 40%. Utilized **RabbitMQ** to ensure efficient asynchronous communication between microservices
- Developed a **React.js** frontend with reusable components for the test grading system enhancing user experience
- Achieved 90% Code Coverage and Quality Gate Pass in **SonarQube** by testing Controllers, Services, and DAO Layers
- Established JUnit testing in the **Jenkins** CI/CD pipeline and integrated **JFrog** Artifactory for storage of build artifacts

Proof of Concept - DevOps

- Executed a POC deploying Spring Boot microservices across multiple cloud platforms with IBM MCM for centralized control, and orchestrated **Kubernetes** deployments using **Helm** in OpenShift and GCP
- Led demonstrations of **Multi-Cloud Management** capabilities, effectively communicating the project's strengths and efficiency to sales teams and stakeholders

PROJECTS

Cloud Native Assignment Management | *Java, Shell Scripting, AWS, Pulumi, Python*

- Developed a Assignment Management Spring Boot application featuring RESTful User and Assignment controllers, integrated with a securely configured AWS RDS MySQL database
- Simplified deployment processes by creating an Amazon Machine Image (AMI) using Packer and shell scripting, automated via GitHub Actions, and improved system monitoring with CloudWatch agent integration
- Deployed the application on Amazon EC2 and introduced scalability with an Auto Scaling group, configured to dynamically adjust resources based on CPU utilization thresholds monitored by CloudWatch alarms
- Configured an AWS Application Load Balancer with SSL termination, ensuring secure and efficient request routing
- Set up cloud infrastructure resources, such as Virtual Private Cloud, subnets, security groups, IAM roles, and EC2 instances, utilizing Pulumi with Python

Real-time Poll Application | *Node.js, React.js, Redis, Socket.io*

- Engineered a full-stack Poll application using Node.js and React, integrating Redis modules like RedisJSON, Hash, List as queue, and pub/sub for efficient data management and real-time updates
- Developed real-time poll result functionality using Socket.io and Redis, enabling real-time data streams
- Designed and implemented a scalable microservices architecture using Redis for data storage and management, optimizing performance and scalability in a distributed environment

Web Automation Testing with Selenium | *Selenium Webdriver, Maven, TestNG*

- Automated 5 scenarios on the school website using Selenium Chrome WebDriver, using assertions for validation
- Implemented a data-driven approach in Selenium to dynamically test various functionalities, ensuring comprehensive coverage and accuracy of test cases
- Utilized TestNG within the Maven framework for organized execution of test scenarios and generating detailed test reports, to manage complex test suites and analyze results effectively