

# SWETHA PATURU

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## EDUCATION

Northeastern University, Boston, MA

May 2024 Expected

Master of Science in Computer Software Engineering

## TECHNICAL SKILLS

**Programming Languages:** C++, Java, Python, JavaScript

**Web Technologies:** Spring Boot, Node.js, React.js, Express.js, REST API

**Database:** MySQL, MongoDB

**DevOps:** Docker, Kubernetes, Terraform, Pulumi, GitHub Actions, Jenkins, Packer, Helm

**Certifications:** Certified Kubernetes Application Developer

## WORK EXPERIENCE

Larsen & Toubro Infotech Ltd.

July 2021 – July 2022

Software Engineer – Cloud Native

Hyderabad, India

- Engineered a Spring Boot-based grading service for an internal skill testing platform, enhancing grading efficiency by approximately 30%, and serving an estimated 15,000 users
- Containerized and pushed Docker images using Jenkins, resulting in a 40% increase in deployment efficiency and a 25% reduction in release cycle time
- Engaged in a proof of concept (PoC) utilizing IBM Multicloud Management, presenting outcomes and strategic insights to stakeholders and clients
- Employed Red Hat Advanced Cluster Management (RHACM) for deploying hybrid cloud environments using Helm charts, resulting in a 25% faster setup for hybrid cloud configurations and a 30% improvement in cross-environment compatibility
- Efficiently managed three Kubernetes clusters, with two clusters on Google Cloud Platform (GCP) and one hub cluster on IBM Cloud, enhancing infrastructure scalability and reliability which led to a 20% improvement in resource utilization efficiency
- Implemented infrastructure deployment using Terraform on both GCP and IBM Cloud platforms, streamlining setup processes and reducing deployment times by approximately 35%
- Leveraged ManageIQ to enable on-demand infrastructure provisioning for developers, boosting development speed by 15% and reducing operational costs by 10%

## ACADEMIC PROJECTS

### DevOps & Cloud Infrastructure Orchestration | AWS, GitHub Actions, IaC

- Created custom AMI with Packer for streamlined application deployment and unified CloudWatch agent for logging and metrics collection. Configured autorun of application using Systemd for seamless startup
- Implemented GitHub Actions workflow for including integration tests, artifact building and AMI creation
- Deployed Pulumi with Python to define and provision essential network resources, including Virtual Private Cloud, subnets, security groups, IAM roles, and Amazon EC2 instances
- Managed DNS updates using Route 53 and SSL certificate integration for secure application endpoints

### File Upload & Cloud Storage Integration | AWS Lambda, Python, Google Cloud Storage

- Created a cloud-based solution which initiates a workflow upon user file upload, integrating AWS & GCP
- Configured an AWS SNS topic to receive notifications containing file URLs & user emails upon file uploads
- Utilized Python-based AWS Lambda for automating the process of downloading files from provided URLs and uploading to Google Cloud Storage buckets

### University Hiring Portal | SpringBoot, Hibernate, SQL

- Developed a university hiring portal with SpringBoot, focusing on backend efficiency. Implemented role-based authorization to ensure robust security
- Incorporated Hibernate in hiring portal to streamline database operations, facilitating smoother and more efficient data management
- Designed an optimized SQL schema for effective data management. Conducted extensive unit testing using JUnit and Mockito to ensure integrity and reliability of code

### WorkIt: Task-management application | MongoDB, Express.js, React.js, Node.js

- Led a 4-member team in building a full-stack productivity application inspired by Notion
- Developed a user-friendly interface with Bootstrap, React.js and built backend using Node.js & MongoDB