

SHAYESTA PARVEEN REEHAN

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EDUCATION

Northeastern University, Boston, MA

Graduated: May 2022

Master of Science in Information Systems & Computer Science

Relevant Courses: Design and Analysis of Algorithms, Databases, Software Engineering, Object-Oriented System Development

TECHNICAL SKILLS

Programming Languages	: Java, Kotlin, Ruby, C++, SQL, Python
Web Technologies/Services	: HTML, CSS, JavaScript, jQuery, AJAX, RESTful web services, Spring Boot, React
Databases	: MongoDB, MySQL, Oracle, Redis, T-SQL
Big Data technologies	: Apache Hadoop, Elastic search, MapReduce
AWS services	: EC2, SES, SNS, DynamoDB, RDS, ECS, EKS, AWS Lambda, AWS SDK for Java and JS
Tools	: Docker, Kubernetes

WORK EXPERIENCE

Software Development Engineer, Amazon Web Services (AWS), Seattle, WA

Sept 2022 -Present

EC2 Local Zone Expansion

- Facilitated the deployment of **EC2 Local Zones** in key international locations (ARN, MCT, SCL, MNL) tailored to the diverse needs of AWS customers
- Configured and optimized monitoring frameworks to ensure operational readiness and successful launch, enhancing service availability and customer satisfaction

CI/CD pipeline Expansion

- Expanded the existing **CI/CD infrastructure** by implementing multiple pipelines using an internal **IaaS** tool built on **Ruby**
- This initiative significantly expedited the build, test and deployment processes, improving developer productivity by **50%**

EC2 Outposts Anti-Entropy Service

- Designed and delivered an anti-entropy service for EC2 Outpost servers that are deployed in customer datacenters, where entropy risk is higher than AWS datacenters.
- This service proactively scans **100%** of the fleet, auto-remediates up to **80%** of anomalies, and reduces manual ticket volume by **40%**
- Cut anomaly detection time from **~12h to <15m**, ensuring no production servers were left in a degraded state
- Improved fleet visibility with dashboards, alarms, Andon cord mechanisms, validated at **>95%** success via gameday tests

EC2 Outposts Server Decommission Automation

- Owned my team's automation efforts of **EC2 Gen5 and Gen6 outpost** decommission workflow in collaboration with 2 sister teams
- Automated **100%** of decommission request, eliminating manual, error-prone steps and reducing ops burden by **20%**
- Improved customer experience by ensuring timely decommissions, preventing unnecessary electricity and housing costs on customers.

Multi-Agent Travel Planner (Work in Progress):

- Currently developing a multi-agent system to automate trip planning
- The project features separate microservices for Flights, Hotels, and Activities that collaborate using **Agent-to-Agent (A2A)** communication. It also incorporates the **Model Context Protocol (MCP)** to standardize how each service interacts with third-party APIs. The stack includes **Kotlin and Spring Boot**, with an architecture built on **AWS Lambda** and **SQS**

ACADEMIC PROJECTS

Big Data Indexing and Analytics on Healthcare Data (Spring Boot, REST APIs, Redis, Elasticsearch)

Sept 2021

- Got hands-on experience with **Big data indexing techniques and analytics** by prototyping a distributed system. Implemented **RESTful APIs** to create, update, patch, retrieve, and delete structured JSON data, secured with JWT-based authentication and validated against JSON schemas.
- Persisted data in Redis as a key-value store, leveraged RabbitMQ for asynchronous message handling, and indexed the data in Elasticsearch to enable powerful search through Kibana.
- To ensure consistency and efficiency, implemented ETag-based caching, which reduced redundant processing and improved API responsiveness by 80%

DevOps Strategies and Cloud Integration for Java Application (AWS, Terraform, Travis CI, SpringBoot)

May 2021

- Automated creation of AWS resources via **Terraform** to host **REST APIs** written in Java using **SpringBoot**
- Configured Autoscaling groups and designed Security Groups to control traffic to resources like **EC2 and RDS**
- Integrated services like **DynamoDB, AWS, RDS, AWS lambda, Elastic Load balancer, Cloud watch, SNS, SES**, etc.
- Managed hosted zones using **Route53** and designed **CI/CD** pipeline for faster delivery using **Travis CI** and **AWS** code deploy