Jayraj Mulani

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Summary

Software Engineer with 3+ years of experience in Full Stack Development, Cloud Computing and DevOps.

Experience

North Carolina State University: Graduate Research Assistant | Full-Stack Development　　　　Sep 2022 – May 2024
- Led the development, deployment, and enhancement of RABapp, a biosecurity and contact tracing application utilized by **17** US State Health Officials. Tech Stack: **Angular, Java Spring Boot, PostgreSQL, Keycloak, AWS and Docker.**
- Developed **Python** scripts using Pandas, openpyxl, and regex to automate file and data processing, reducing manual efforts by **50%**.
- Leveraged **Scrum** methodology to deliver robust production-ready code and reduced **40%** bugs through rigorous **code reviews**.
- Improved RABapp API performance **5x** by implementing CompletableFuture-based asynchronous and multithreaded RESTful APIs.
- Managed recruitment by redesigning programming challenge, screening applicants, conducting interviews, and onboarding new hires.

Oracle: Software Developer 2 | Applications Engineer　　　　Sep 2020 – Jun 2022
- Collaborated in design, development and deployment of **Terraform** based service to automate provisioning and decommissioning of Oracle Cloud resource stacks across compartment hierarchies.
- Automated critical patch update process to save over **100** man-hours per quarter using **Jira APIs and OCI Python SDK.**
- Demonstrated leadership and collaboration skills by leading **4** projects, mentoring a team of **3** and conducting technical interviews.
- Diagnosed and fixed **78** bugs in Oracle Fusion App Suite, built using Oracle Application Development Framework (ADF).
- Ensured backwards compatibility by patching and back-porting over **20** bug fixes and enhancements.

Oracle: Project Intern　　　　Jan 2020 – Jun 2020
- Engineered an auto-backup tool in Python for synchronizing large server files with OCI Object Storage to ensure **disaster recovery**.
- Implemented asynchronous solution to manage and track cloud resource allocation processes using **Jira APIs, Django and React.js**.
- **Dockerized** and deployed apps on Oracle Cloud Infrastructure (OCI) leveraging Compute and Autonomous Database.
- Applied Critical Patch Updates (CPUs) on **7** clustered **Linux** environments to ensure enhanced **security** with minimum downtime.

Tata Consultancy Services: Summer Intern　　　　May 2019 – Jul 2019
- Reduced manual testing time by developing a semi-automated API testing tool named "API Scoreboard" using Angular, Spring-boot.
- Deployed API Scoreboard on **Amazon Web Services** by leveraging services like Elastic Beanstalk, RDS, S3 and EC2.

Skills

Languages:	Java, Python, TypeScript, JavaScript, SQL, C/C++, HTML/CSS, Shell
Frameworks:	Django, Flask, React, Spring-Boot, Angular, PostgreSQL, Redux, MySQL, MongoDB, MariaDB
Tools & Technologies:	Linux, Terraform, Docker, Ansible, Jenkins, OAuth2.0, Github, Jira, Keycloak, Agile, AWS, GCP
Certifications:	*Oracle Cloud Infrastructure - Architect Associate* ↗, *Amazon Web Services - Cloud Practitioner* ↗

Education

North Carolina State University, Master of Computer Science　　　　Aug 2022 – May 2024
Computer and Network Security, Software Engineering, Software Security, DevOps, Cloud Computing, Deep Learning　　*GPA: 4.0/4.0*

Nirma University, B.Tech. in Computer Engineering　　　　Jul 2016 – Jun 2020
Computer Networks, Database Management Systems, Data Mining, Operating Systems, Algorithms　　*GPA: 9.14/10.0*

Projects

From Chaos to Control: Terraforming a New DevOps Era ↗, DevOps, Academic Project　　　　Aug 2023 – Dec 2023
- Orchestrated a DevOps pipeline utilizing Ansible, Docker, GitHub Actions, and **Terraform** for automated resource provisioning.
- Streamlined deployment of a NodeJS application on Google Cloud Platform (**GCP**), ensuring a robust and scalable infrastructure.

JobTrackr ↗, Software Engineering, Academic Project　　　　Sep 2022 – Dec 2022
- Automated end-to-end deployment on **AWS EC2** by engineering a **CI/CD pipeline** by utilizing **Github Actions, Ansible and Jenkins.**
- Accelerated release cycles, enhanced scalability, and fostered team collaboration by implementing **Agile** development practices.

ERP System, Raahee Multipack Pvt. Ltd., Freelance Project ↗　　　　Aug 2021 – Mar 2022
- Designed and implemented a fully functional ERP application in **React.js and Python Flask** for a packaging manufacturing company ↗
- Deployed the app on OCI and improved operational efficiency by **40%**, supporting **120** employees with essential operations.

Inaudible ↗, Deep Learning, Academic Project　　　　Jun 2019 – Dec 2019
- Empowered deaf individuals to comprehend English audio by delivering a PoC to translate English Audio to ASL video in real-time.
- Performed comprehensive preprocessing on over **30GB** of American Sign Language (ASL) video and CSV datasets.
- Leveraged Natural Language Processing (NLP) and Neural Machine Translation (NMT) techniques to achieve **67%** accuracy.

Publications

Mulani, J., Heda, S., Tumdi, K. Deep reinforcement learning based personalized health recommendations. In Deep Learning Techniques for Biomedical and Health Informatics (pp. 231-255). Springer, Cham. ↗