

RAVITEJA REDDY G

Senior Software Engineer

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Won 3rd Prize, ESRI Intern Hackathon 2023 • AIR 1921, IIT-JEE 2013

TECHNICAL SKILLS

- Languages: **Java, Python, C++, C, SQL, Kotlin**, TypeScript, JavaScript, R, Scala, Bash script
- Databases: **MySQL, Redis, MemCached, NoSQL, PostgreSQL**, MongoDB, SQLite, MSSQL
- Frameworks: **Spring Boot, React, Flask, Locust**, Srping MVC, Django, OpenFaas, Node.js, JUnit
- Tools: **Docker, Git, Maven, Gradle, Jenkins, Postman**, SoapUI, Minikube, IntelliJ, JupyterLab, Sonar
- Libraries: **Scikit-learn, Jacoco**, NumPy, Pandas, Matplotlib, JDBC, Mybatis, Hibernate-ORM
- AWS Technologies: **Lambda, EC2, ASG, SQS**, S3, RDS, DynamoDB, Athena, Step Functions, IAM
- Technologies: **ActiveMq, Kubernetes, REST, Kafka**, RabbitMq, gRPC, SOAP, Ceph, ZooKeeper, Heroku, OOPs.

EDUCATION

Master of Science, Computer Science (MSCS) - CGPA: 4.09/4

Aug. 2022 - May. 2024

Arizona State University, Tempe, Arizona

Bachelor of Technology, Mathematics & Computing

Jul. 2013 - Jun. 2017

Indian Institute of Technology Guwahati, Guwahati, India

INTERNSHIPS & PROFESSIONAL EXPERIENCE

Software Development Intern | ESRI - Redlands, CA, USA

May. 2023 - Present

- Architected a suite of **REST APIs in Java** to perform seamless CRUD operations over NoSQL database.
- Engineered a JSON-based solution to enable defining custom data classification model. Complemented by a POC application developed in React and TypeScript.

Senior Software Engineer | ClearTax - Bangalore, India

Mar. 2021 - Aug. 2022

- Order Management Service - (Backend microservice)
 - * Developed **Low Level Design** following **SOLID** principles and **design patterns** like Factory, Builder and Singleton.
 - * Devised **REST APIs** and **webhooks** using **Java Spring Boot** and **MySQL** ensuring **idempotency** for transactions.
 - * Created exhaustive unit and integration tests using Jacoco library to maintain a code coverage of over 90%.
- Sales Sync Service - (Event-driven backend microservice)
 - * Engineered a robust microservice with **AWS Step Functions** workflows, implementing an event-driven architecture for seamless synchronization of offline sales data from Salesforce to the OMS.
 - * Designed workflows for offline sales creation and updation events, implemented in a **Java Spring Boot application**.
 - * Improved data accuracy by 60% and reduced human effort by 90% through synchronization workflows.
- Integrated SAML authentication in **Python Django** application through REST APIs for customer onboarding.
- Performed stress and load testing on 5 backend microservices using Locust to measure **throughput** and **latency**.

Senior Software Engineer | Arcesium - Hyderabad, India

Apr. 2019 - Mar. 2021

- Data Warehouse Pipelines - Custom ETL Application
 - * Spearheaded a 3-member cross-functional team in building **ActiveMQ** based events processing **Microservice**.
 - * Implemented **pessimistic locking** for **data consistency**. Pipeline is capable of processing books with 2 million events.
 - * Reduced the application deployment time by 60% through containerization and github CI/CD pipeline.
- Utilizing **caching**, **asynchronous calls** and batching, improved application performance by over 30%.
- Exposed REST endpoints to pause or resume Spring Batch job thus reducing failure handling effort by 40%.

Solution Integration Consultant - I | FICO - Bangalore, India

Jun. 2017 - Mar. 2019

- Analysed business requirements and enhanced RDBMS schema of Java web application by extending base product.
- Added an auditing capability leveraging the change event in jQuery for seamless tracking of data changes.

PROJECTS

Face Recognition as a Service (IaaS and PaaS Architecture)

- Created a multi-threaded **Python Flask** application on **AWS EC2** along with essential **S3 buckets** and **SQS queues**.

- Replicated auto-scaling behavior in Python script to dynamically provision up to 20 instances from saved AMI.
- Shifted from **IaaS** to **PaaS** architecture using **AWS Lambda**, eliminating the auto-scaling script dependency.

FitLife (Android application)

- Created an android application using **Kotlin** to suggest personalized workouts as per user preferences and history.
- By leveraging **coroutines**, we significantly enhanced the transition between different activities in the Android application, resulting in a smoother and more seamless user experience.
- Developed fuzzy logic to generate user rating and suggest workouts. Added capability to record user feedback.
- Used camera and accelerometer sensor in the smart phone to measure metrics like heart and respiratory rate.

Diabetes Data Analysis & Clustering

- Developed a Python script for extracting Time Series data from Continuous Glucose Monitoring (CGM) and insulin pump datasets.
- Implemented a feature extraction pipeline and generated a machine learning model to derive valuable insights for optimizing diabetes treatment strategies.
- Designed and executed a clustering algorithm to categorize data patterns. Evaluated the accuracy of clustering using key metrics, including Sum of Squared Errors (SSE) and supervised cluster validity metrics.

Habitability Prediction of Exoplanets

- Performed data pre-processing and Exploratory Data Analysis (EDA) on PHL data for feature selection.
- Implemented a collection of Machine Learning models like SVM, Logistic Regression, KNN, K-Means on the pre-processed data.
- Compared the model prediction accuracy using metrics like Accuracy, Precision, Recall and F1 Score. Achieved an average accuracy of 97%.

ACHIEVEMENTS

- Awarded 3rd prize in the ESRI Intern Hackathon 2023, among 18 teams and 144 participants.
- Achieved AIR 1921 in IIT JEE, among the top 0.1 percentile in JEE 2013 out of 1.5 million students.
- Elected to the Students Gymkhana Council 2015-16, serving as the General Secretary of Kameng hostel.