

# RAVITEJA REDDY G

Software Engineer

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

## TECHNICAL SKILLS

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- 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

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**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

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**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.
  - \* Modernized the deployment process by creating a sophisticated CI/CD pipeline utilizing GitHub Actions, reducing the deployment time by 60%.
- 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.
- Integrated third party SOAP APIs to fetch credit information making use of token based authentication.
- Added an auditing capability leveraging the change event in jQuery for seamless tracking of data changes.

## PROJECTS

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### 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

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- 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.