

# Alan Jacob

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## Skills

**Languages/Frameworks:** Java, Maven, Spring, Spring boot, Gatling, SQL, Python, GraphQL, JavaScript, TypeScript, Webpack, npm, React

**Technologies & Tools:** AWS, Kubernetes, Postgres, MongoDB, DynamoDB, S3, SQS, Lambda, EC2, Docker, CloudFormation, Redis, Elasticsearch, Kafka, REST, OAuth, Splunk, Wavefront, Git, Jenkins

## Work Experience

Intuit, Bangalore

Aug 2020 - Oct 2023

### Software Engineer 2

- Validated all functional and non-functional requirements during the **EC2 to Kubernetes** migration, identifying and resolving issues. Developed dashboards, runbooks, and alerts to ensure a smooth transition and streamlined support. The **Java Spring** backend service powers **real-time messaging** for front-end clients across Intuit.
- Developed and implemented service-level indicators (SLIs) using **Java Micrometer, Prometheus, and Wavefront**, enabling customized autoscaling, real-time performance monitoring, and proactive alerting, with Wavefront dashboards extensively used to ensure system stability and optimize service health during peak loads.
- Developed **Gatling** load test scripts to simulate peak traffic on the **Java Spring WebSocket** based backend, ensuring scalability to support **millions of concurrent** user connections.
- Implemented automation workflows using **Rundeck** platform to orchestrate critical tasks such as region failover and **Redis** failover as part of Failure Mode and Effects Analysis (FMEA), ensuring service resilience and high availability during system outages.
- Worked on migration of Java Spring client side code from **ActiveMQ** to Apache **Pulsar**, optimizing message throughput, scalability, and fault tolerance. Refactored **JMS** based producers and consumers to leverage Pulsar.
- Developed a **React** based frontend playground UI, enabling developers to seamlessly test and debug integrations with our **Java spring websocket** based backend service designed for real-time messaging between frontend clients.
- Designed and developed the Exceptions Service in Intuit Developer Portal, enabling developers to request Security and Compliance exceptions through a unified platform. This **streamlined exception management**, consolidating previously fragmented processes and automating notifications for approvers and expiration reminders for requesters. The frontend is built with **React** and backend using **Python, AWS Lambda, API Gateway, SQS, MongoDB**.
- Designed and developed the Metadata Service UI at Intuit, enabling developers to access metadata for any cloud resources across all providers. The frontend, built with **React**, interacts with the backend via a **GraphQL** API.

Intuit, Bangalore

Jan 2020 - Jul 2020

### Co-op Internship

- Implemented **spring cloud config** solution to externalize configuration settings, eliminating the need for code redeployment. This resulted in an **80% reduction** in release time, as configuration changes were dynamically fetched and updated in real time.
- Implemented **Jenkins** build pipeline that ensures unit tests run and code coverage percentages are met for pull requests.

## Education

P.E.S University, Bangalore, India

Aug 2016 – Jul 2020

B.Tech, Computer Science and Engineering

**CGPA: 8.64/10**

Relevant Coursework: Object Oriented Programming, Databases, Web Technologies, Discrete Maths, Data Structures and Algorithms, Operating Systems, Computer Networks, Advance Data Structures and Algorithms, Design Patterns, Performance Engineering

## Project Work

- 2D online multiplayer game:** Developed a 2D web based online multiplayer game similar to slime volley desktop game in Ubuntu. The Frontend is built using **HTML5 Canvas** and backend uses **httpd** and **Spring WebFlux** for **websockets**.