Abdullah Jaffer

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ABOUT ME

Driven **software engineer** with a passion for building scalable, resilient software. Extensive experience in **Java**, **Kotlin**, **Spring Boot**, **Docker**, and cloud technologies like **AWS**, and **Kubernetes**. Proven ability to design, develop, and deploy innovative features in an agile environment. Eager to leverage my expertise in building low-latency distributed systems

TECHNICAL EXPERTISE

Java · Kotlin · Spring Boot · Hibernate · JPA · Liquibase · SQL · MySQL · Postgres · CI/CD · Github Actionst · Dynamics 365 · AWS CodeBuild · Docker · Kubernetes · Apache Kafka · Apache Avro · AWS SQS · S3 · Redis · Elasticsearch · MongoDB · Javascript/Typescript · NodeJS · NestJS · ReactJS · Python · AWS S3 · AWS EC2 · Terraform · Rest · GRPC · GraphQL · GraalVM · Apache Pinot · Grafana Alerting · Prometheus · Loki · Domain Driven Design · Microservices · Event Driven Architecture · CQRS · JUnit · TestContainers · Test Driven Development · Keycloak · Auth0 · Open API · Protobuf · Elide · Bash

WORK EXPERIENCE

NINJA | SENIOR SOFTWARE ENGINEER   Remote | Nov 2024 – Present

- Building and designing an improved data platform independently with the capability to process **terabytes** of data in sub seconds, using **Clickhouse** as a data lake and **Airflow** as the job orchestrator.
- Automated the request for quotation process by building a platform to bid quotes in **Spring Boot** for third party suppliers, reducing time to procure inventory from 1 week to a few hours.
- Dropped **race conditions** and **data conflicts** to **0%** while creating purchase orders by building a **distributed locking** mechanism through **Redis**.
- Implemented and scaled batch purchase order creation process by using worker jobs to create **1k+ POs** asynchronously in **Dynamics 365**, reducing time to create POs by **90%**.
- Implemented a new security algorithm to authorize third party vendors and adopted it across **5 microservices** using a generalized SDK.
- Added device and app version tracking while order creation **asynchronously** to facilitate customer segmentation for targeted recommendations.
- Wrote **unit tests** using **JUnit** for regression testing and added testing constraints in **CI pipeline**.
- Working in a cross functional **agile team** of 10 engineers from different geographies in domain driven squads.
- Primary tech: Java, Kotlin, MySQL, Redis, Hibernate, Spring boot, Kafka, JobRunr, Dynamics 365, NodeJS, Microservices, Kubernetes, Elide, GraphQL.

JILLION | FOUNDING ENGINEER   Remote | Apr 2024 – Oct 2024

- Designed and implemented **KYC/KYB process for merchant onboarding** ensuring risk-based compliance.
- Managed the lifecycle of registered merchants and their payment configurations using **HTTP 2**, **GRPC**, and **Protobuf** for efficient microservice communication.
- Implemented **transactions** service to persist payment events such as transfers, chargebacks, and void payments received from the payments domain using **Kafka streams**.
- Created **checkout service** to save checkout configurations for merchants and render checkout templates.
- Integrated **user management** domain and its connection with **Auth0** to support user registration.
- Created **CI/CD pipeline** for **Auth0 scripts** using **Github actions**.
- Wrote integration tests using **Test Containers** and Unit tests using **JUnit** using **Test Driven Development**.
- Primary tech: Java, Kotlin, Hibernate, Spring, Kafka, Microservices, Kubernetes, GRPC, Postgres, Open API, S3.

BAZAAR TECHNOLOGIES | SENIOR SOFTWARE ENGINEER   Karachi, Pakistan | Jan 2023 – Apr 2024

- Took ownership of the **software development lifecycle** of a **geospatial sub-system** to identify special promos and discounted pricing to high density area customers belonging to special partners. Used **polygon searching**, resulting in a **30% burst in customer orders** increasing net GMV.
- **Increased the scalability** of the product search domain by **10x** using **CQRS** architecture with **Spring Boot** and **event-driven messaging** via **Kafka**. This achievement reduced query latency by **70%** and handled **30M queries** per month(1000 concurrent requests at peak times).

- Architected live warehouse stock tracking and batching in the system for efficient inventory management using the **FIFO algorithm**, this reduced operational inefficiencies by 20%.
- Increased the reliability of **Kafka** event streams by **10 times** by implementing event **retries** and **dead letter queue**. Persisted error events in **MongoDB** for manual resolution.
- Migrated all services to use **AWS MSK** and **Apache Avro** for more reliable event streams.
- Made several **SQL query optimizations** by fixing **N + 1 query** issues and resolving **NoSQL concurrency issues** using a custom optimistic locking implementation.
- Reduced memory footprint of **JVM Docker** images by **60%** optimizing heap size and using **AOT** compilation with GraalVM.
- Devised plan for and executed company wide migration for **auth and user domain** from legacy system to **Keycloak** utilizing event driven communication to sync data.
- Primary tech: Java, Kotlin, Typescript, Go, Hibernate, Spring, NodeJS, NestJS, Kafka, Microservices, Kubernetes, MySQL, Postgres, ElasticSearch, MongoDB, Redis, ReactJS.

BAZAAR TECHNOLOGIES | SOFTWARE ENGINEER   Karachi, Pakistan | Jan 2022 – Dec 2022

- Improved **Elasticsearch** search relevance using **query boosting**. resulting in **25%** increase in search to cart ratio.
- Developed a **metrics service** using **Golang** for high throughput analytics queries to **Apache Pinot** with an SLO of **2000 requests/s**.
- Created **slack alerts** for critical services using **custom prometheus queries** based on service SLI and SLO which increased **incident response times by 20%**.
- Utilized **Terraform** to automate the provisioning of infrastructure resources like **Keycloak** and **ElasticSearch** for efficient cloud deployments.
- Wrote **ETL pipeline** using **Apache Spark** to process **30 Terabytes** of sales orders and load them into **Apache Pinot** for fast retrieval speeds of up to **800 ms**.
- Refactored **5000 lines of code** in a complex service by using clean code practices.
- Led the migration of a **critical geospatial database** from **MySQL** to **Postgres** with **0% downtime**. This resulted in a reduction of query latency from **600 ms** to **50 ms**.
- Primary tech: Java, Kotlin, Typescript, Go, Hibernate, Spring, NodeJS, NestJS, Kafka, Microservices, Kubernetes, MySQL, Postgres, ElasticSearch, MongoDB, Redis, ReactJS.

TINTASH | SOFTWARE ENGINEER   Lahore, Pakistan | Jul 2020 - Jan 2022

- Developed a Healthcare advisory platform in **ReactJS, Python** and **Django** ensuring API security in compliance with HIPPA.
- Made a **serverless backend** for a sound therapy app, leveraging **GCP cloud functions** and a backend server made in **Python** and **Django** for advanced user session analytics visualized in the admin dashboard.
- Decreased latency of CSV exporter feature from 2 secs to 100 ms for user data by pre-computing analytics information and persisting in **Firebase**.

ARBISOFT | SOFTWARE ENGINEER | INTERNSHIP   Lahore, Pakistan | Jul 2019 – Sep 2019

- Created a sentiment infused search and analytics engine end to end using data scraped from Dawn. Used **Javascript**, **Reactjs**, **Python**, and **Django**.

OPEN SOURCE CONTRIBUTIONS

SPRING BOOT ⬀   JAVA, SPRING BOOT
Contributed a modification to the official Spring Boot github repo.

BUTTON GROUP UI COMPONENT ⬀   JAVASCRIPT, REACTJS
Created an **NPM** based UI utility to generate button groups dynamically with event listeners attached.

EDUCATION

BSc. Software Engineering   Lahore, Pakistan | Sep 2015 - Aug 2020
COMSATS UNIVERSITY ISLAMABAD