

# Umar Hussain

## SOFTWARE ENGINEER

Dresden, Germany

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## Work Experience

### elevait GmbH & Co. KG

Dresden, Germany

MASTER THESIS STUDENT

Jul. 2021 - Present

- Working on thesis to build a Multi-Tenant Microservices architecture for efficient deployment of SaaS applications.

### AI4BD Deutschland GmbH

Dresden, Germany

JUNIOR SOFTWARE ENGINEER (WORK STUDENT)

Mar. 2020 - May 2021

- Developed back-end applications with Node.js, NestJS framework to provide REST APIs and WebSockets for front-end applications.
- Developed unit and integration tests for NestJS and Angular applications with Jest and Cypress with their mock environments.
- Deployed Sentry server on-premise to monitor Web applications for errors and performance issues. Also integrated it in front-end and back-end applications to link errors with the deployed version of applications.
- Developed CI/CD pipelines environment to test & build monorepo codebase, create & release semantic versions on changes and publish Docker images to *Harbor* registry.

DEVOPS INTERN

Sep. 2020 - Feb. 2021

- Learned about the architecture and components of Kubernetes and tools to interact with the cluster like *kubectl*.
- Migrated Kubernetes applications to Helm Charts. Refactored the deployment files for better reuse of charts.
- Devised strategy to apply *GitOps* for automated installation of Helm Charts to support multiple customers in the cluster.

### Teamo Inc.

Islamabad, Pakistan

SOFTWARE ENGINEER

May 2017 - Sep. 2019

- Implemented Serverless applications using Firebase and Google Cloud Functions for front-end and mobile applications.
- Developed back-end applications with Node.js, Elasticsearch & Spring for async data processing from multiple data sources.
- Built and deployed infrastructure with Docker and GCP.
- Integrated Stripe payment processing to accept payments in Web and mobile applications.
- Built & optimized mobile applications with Android and React Native for gift card platform SoHookd.
- Developed CI/CD pipelines for Android, Node.js and Spring code-bases using Bitbucket Pipelines.

## Skills

**DevOps** Kubernetes, Helm, Docker, Jenkins, Bitbucket Pipelines, Google Cloud Platform, Sentry

**Back-end** Spring, Node.js, NestJS, Express, Elasticsearch, REST API, WebSocket

**Serverless** Firebase, Google Cloud Functions, Firebase Storage, Firebase Realtime Database

**Databases** MongoDB, MySQL, Redis, SQLite, Cloud Firestore

**Testing** Unit Testing, E2E Testing, Test Driven Development, Jest, JUnit, Cypress

**Programming** JAVA, JavaScript/TypeScript, Go

**Mobile** Android, React Native, Firebase Crashlytics

**Tools** Git, Bash, Gradle, Maven, Nx (Monorepo), Jira, OpenAPI

**Languages** English (C1), German (A1)

## Projects

### Reverse Proxy

Developed round-robin load-balancing proxy in Go for servers using Zookeeper for coordination. It also handles the unavailability of the server(s) and routes traffic to available instances.

### MPP

Optimized code to improve performance on MPP-core machines and achieved a speedup of 71x on 56 cores for the Mandelbrot set program.

### Se-HIMAS

Developed health information management system using Spring framework to automate medical records at a department in a local government hospital.

## Education

### Technische Universität Dresden

Dresden, Germany

M.Sc. DISTRIBUTED SYSTEMS ENGINEERING

Oct. 2019 - Present

- Systems Engineering
- Software Fault Tolerance
- Design Patterns and Frameworks
- Component Based Software Engineering
- Mobile Communication and Computing
- Transactional Information Systems
- Fundamentals of Concurrent and Distributed Systems
- Distributed Operating Systems