

SAQUIB KHAN

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EDUCATION

The University of Texas at Dallas, May 2016

Master of Science (MS) in Computer Science

University of Mumbai, Dec 2010

Bachelor of Engineering (BE) in Electronics and Telecommunication.

LINKEDIN PROFILE:

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PROFESSIONAL SUMMARY

Company: Atimi Software (Contracted to Audible Inc. an Amazon subsidiary)

Duration: Sep 2022 - April 2023

Role: Senior Backend Developer

Location: Vancouver, British Columbia, Canada

Responsibilities:

- Worked as a contractor for an Agile team within Audible.
- Worked as Full Stack developer working on fixing issues with various aspects of the User Library and User Reviews modules.
- Became familiar and comfortable with a variety of proprietary front-end tools/frameworks used at Amazon.
- Worked with Amazon Code Pipelines to build and deploy code.
- Worked on improving the health of code pipelines by improving Integration Test coverage at different stages of the pipelines using the internal services and tools owned by Amazon.
- Gained an understanding of how services/responsibilities are distributed across Audible's microservices-based architecture.
- Worked with the team to get changes through the code pipelines via code reviews and change management tools.

Client: National Center for Atmospheric Research (NCAR)

Duration: July 2017 - July 2022

Role: Software Engineer II

Location: Boulder, Colorado, USA

Description:

NCAR's mission is to bring climate science to the American public. It is a non-profit institution that primarily focuses on climate science and research. I was part of a Software Engineering team that was tasked with the responsibility of making scientific data and analysis available to the public. We also had the additional responsibility to ingest data from the disparate labs at NCAR and make that data easily accessible to the public.

Responsibilities:

- Worked as a part of an Agile/Scrum team to maintain a web application that served as a repository of climate data.

- Participated in code reviews to ensure high standards of code quality.
- Worked on two tech stacks - Java/Spring/Hibernate/Solr/Postgres and Python/Jinja/Flask/Solr/Postgres.
- The Python web application ingested xml metadata uploaded by various laboratories at NCAR using Git WAFs. During that time, the application became increasingly expensive to modify. The throughput dropped as more data was added to the application. Conferred with the Technical Lead and worked with the interns and other engineers to replace the Python monolith with a set of microservices. Deployed the new architecture on **AWS EC2** instance.
- Centralized the business logic for authorization for the Java application into a single, unit-testable module. Migrated the authorization from Groups/Roles-based Access Control(RBAC) to Attribute Based Access Control(ABAC) model using **Spring Security**, **Spring MVC**, **Spring Expression Language** and **Spring AOP**. Mentored the team on modifying the views and services to use the centralized module for all authorization calls.
- Refactored legacy code that interacted with external applications into modular, unit-testable code using Design Patterns, SOLID Principles and Clean Code rules. In situations where the applications were only available on production, I led the effort in creating testing infrastructure. Having test infrastructure for production-only services reduced the unintended bugs and improved the confidence of users.
- Used **Spring Integration** and **Enterprise Integration Patterns** to create multiple workflows that worked with persistent queues (**ActiveMQ**) for resource-intensive tasks like file-system audit of 20 million files, recording metrics for file download requests etc.
- Used Clean Code and SOLID principles while trying to write modular and maintainable code with high readability.
- Wrote unit tests to improve line and module coverage.
- Took an active part in code reviews and setting up a definition of **Done** for the team.
- Migrated the test and production infrastructure from pure VMs on NCAR's proprietary infrastructure to containerized VMs using **Docker Swarm**. This allowed the team more control over the infrastructure and described the infrastructure as code in separate Github projects under version control.
- Worked with GeoSpatial search queries and data in Solr. Helped **containerize Solr using Docker** for developer, test and production environments. This allowed the team to upgrade to a more recent version of Solr with support for SpatialSearch that made Geospatial queries more accurate for end-users. Upgraded from a legacy version of Solr to the most recent one.
- Set up Continuous Integration using **CircleCI**, **Maven** and **Github Packages**.
- Re-designed the UI of the application after reviewing UI/UX articles, researching UI of competitors, reviewing feedback from stakeholders. This was a gradual and significant UI overhaul for the application that proved quite successful. Tried to make meaningful improvements using **JSP**, **Javascript**, **jQuery**, **Bootstrap**, **DataTable.js** and **Leaflet.js** libraries.
- Used Feature Toggles (**Togglz** library) to perform dark deployment of contentious UI changes and enable A/B testing of multiple UI designs to elicit feedback from stakeholders and end-users. Also used Feature Toggles to perform dark deployment of high-risk changes.

- Helped in migrating files from Campaign Storage(NCAR'S Fast File Storage Media) to NCAR's Object Store (similar to **AWS S3**) when it was launched. Researched best practices in AWS S3 to ensure that the files were being saved via the best practices when using cloud file storage.
- Helped containerize test and production infrastructure using **Docker**. Familiar with **Docker Swarm, Docker Network, Docker Compose, Docker Config, Docker Secrets** etc. Led the effort in migrating the local development environment from **Vagrant** to **Docker**.
- Migrated the unit testing infrastructure from **JUnit4** to **JUnit5**. Parallelized the execution of unit test execution to reduce time taken to run the tests.
- Attended technical conferences to try to come up with solutions to fix systemic problems faced by the team. Brainstormed these ideas with the Technical Lead and Product Owner to shift focus and tools as needed.
- Used Spring Integration to audit all the files being serviced by our application. Created prototypes using **Spring Batch** and **Spring Integration** to explore the pros and cons of each. Had a knowledge transfer session with the team to ensure that Spring Batch and Integration were used in relevant situations in future.
- Well-versed in Spring Integration, Spring MVC, Spring AOP, Spring Security, Spring Batch.
- Refactored the relational database schema using **JPA** and ORM frameworks like **Hibernate** and changeset tools like **Liquibase**.

Client: Tango Management Consulting

Duration: August 2015 - March 2017

Role: Java Developer

Location: Dallas, Texas, USA

Responsibilities:

- Set up the CI/CD architecture for an Oracle ADF application using **ANT** script and **Jenkins** installed in an **AWS EC2** instance. This saved 20 minutes per manual redeployment.
- Used spring dependency injection, annotations and Spring MVC components to implement the business and presentation layers of the application.
- Utilized AWS S3 SDK platform to migrate files, stored as blobs in DB, to an AWS S3 bucket. Developed a REST API used for file management to be consumed by other teams at this company.
- Developed several REST web services which produce both XML and JSON to perform tasks, leveraged by web applications.
- Consumed SOAP based Web Services to communicate with other applications.
- Deployed Application instance on Tomcat and WebLogic Server.
- Developed the Web application using Spring MVC, jQuery, Html, JSP and JavaScript.
- Developed the data access classes using JDBC and SQL queries
- Used log4j for logging and SVN/Git for version control.
- Brief experience on **AngularJS** while consulting another team on their Oracle Map project.
- Experience in developing web-crawlers and DOM parsers like jsoup, selenium.