Muhammad Muzaib

Full Stack Java Software Developer

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Computer science graduate passionate about creating user-focused, efficient, and reliable software. Adept at collaborating across teams and delivering high-quality solutions, I'm eager to grow in a dynamic environment and leverage my Java, React, and agile development expertise to make an immediate impact.

Education

Brooklyn College (City University of New York)

Sep 2020 - Jun 2024

Bachelor of Science Computer Science

Relevant Coursework: Operating Systems, Databases, Robotics, Computer Architecture, Theoretical Computer Science, Programming Languages, Java Programming, Assembly Programming, System Design, Agile Methodologies, Networks and Protocols

GPA: 3.3

Work Experience

Remote Software Development Intern

Jun 2024 - Sep 2024

Primatoz | *Manchester, UK*

Primatoz is an information technology consultancy agency offering digital solutions for businesses. Worked remotely to maintain and enhance the company's web platform, delivering high-quality features on schedule.

- **Reduced** average page load time by 0.5 seconds (from 2.5s to 2.0s) by implementing code splitting and optimizing images, leveraging HTTP caches and Elastic caches for faster data retrieval, refactoring code according to SOLID principles for maintainability, documenting new and updated endpoints using Open API for clearer team collaboration, and employing Resilience4j fault tolerance (e.g., rate limiter patterns) at the gateway level to handle traffic spikes and improve reliability.
- **Increased** code coverage from 60% to 75% by creating unit tests with JUnit and Mockito, conducting integration tests with Cucumber, and performing load testing using JMeter, thereby enhancing the reliability and performance of the codebase.
- **Resolved** a critical concurrency issue in the microservices architecture by analyzing application logs, debugging race conditions in Java-based threads, and collaborating with senior developers to implement thread-safe data structures—reducing error rates by 35% and preventing user-session conflicts under heavy load.
- **Decreased** average database query time by 15% by adding indexes and optimizing SQL queries in a MySQL-based microservice.
- **Improved** user navigation flow (based on user feedback) by updating site menus and refactoring React components to reduce complexity.
- **Leveraged** SCRUM ceremonies to streamline cross-functional collaboration and pair programming, resulting in faster deployment cycles and improved code quality through robust CI/CD pipelines.
- **Utilized** a modern tech stack—Java 21, Spring Boot, Rest Services, React, MySQL, Docker, Git/GitHub, Resilience4j, Open API, and HTTP/Elastic caches—to develop, document, and deploy features while adhering to Scrum-based agile best practices, CI/CD pipelines, and pair programming.

Projects

College Invaders

College Invaders is a 2D arcade game inspired by Space Invaders, featuring custom Brooklyn College-themed elements.

- **Developed** using Phaser 3, HTML, CSS, and JavaScript, incorporating animations, collision detection, and engaging gameplay mechanics.
- **Achieved** smoother gameplay (measured by stable 60 FPS) by using Web Workers in Phaser 3 to handle collision detection and animations.
- **Designed** intuitive controls, score tracking, and dynamic difficulty progression, enhancing user engagement.
- **Worked** in a team setting, handling feature implementation, debugging, and project planning, strengthening collaboration skills.
- **Tech Stack**: Phaser 3, HTML, CSS, JavaScript, Web Workers

Book Share

Book Share is a mobile application designed to facilitate book sharing and renting among students, helping reduce the cost of textbooks.

- **Developed** a cross-platform mobile app with React Native for seamless compatibility across devices.
- **Implemented** key features including user-generated book listings, search and filtering, and community-driven interactions.
- **Modeled** the app after Facebook Marketplace, allowing users to list books for gifting or affordable rentals, reducing reliance on expensive textbook providers
- **Integrated** Spring Security for authentication and MySQL for database management, ensuring a scalable and efficient system.
- **Tech Stack**: React Native, Html, TypeScript, CSS, Spring Boot, Java, MySQL, Docker, Material - UI

Tokenizer

Tokenizer is a high-performance parsing engine designed to process and evaluate arithmetic expressions, supporting variables, unary negation, and parentheses.

- **Built** using Java, leveraging structured design principles to ensure efficient computation and reliable expression evaluation.
- **Optimized** data handling techniques, improving performance and readability.
- **Ensured** 99% accuracy in parsing and evaluating arithmetic expressions by implementing a robust Java-based tokenizer that supports variables, unary negation, and parentheses.
- **Tech Stack**: Java

Core Skills

PROGRAMMING LANGUAGES: HTML / CSS, - Java 21, JavaScript, TypeScript, MySQL, C++

FRAMEWORKS AND LIBRARIES: React, React-Native, Material UI, - Spring Boot, Spring MVC, Spring Cloud (Gateway, Security, OAuth, JWT), - Keycloak, Hibernate, Google Jib, Resilience4J, HTTP Cache, Elastic Cache

TOOLS AND TECHNOLOGIES: VsCode, IntelliJ, Git / GitHub, Subversion, - Docker, Docker Hub, JUNIT-5, Mockito, TDD, BDD, Integration Test (Cucumber), Load Testing (JMeter), Jira, SCRUM, Agile, SOLID Principles, Ubuntu Linux, Apache Tomcat, JSP/Servlets, Microservice Architecture, Rest Webservices, Load Balancer, Grafana, Loki, Grafana Tempo, Open API, JSON Schema, SLF4J, Log4J, XML, XSD, SonarQube, Spot Bugs, Check Style

Protocols: TCP, UDP, FTP, SMTP, HTTPS