

# SARRAF RAHMAN

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## TECHNICAL SKILLS

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**Languages:** Javascript, Typescript, Java, Kotlin, Python, C/C++ , SQL, Powershell, HTML, CSS

**Technologies:** React.js, Next.js, Node.js, Express.js, Spring, Redux, Docker, MongoDB, PostgreSQL, AWS(S3, Lambda, H2)

**Developer Tools:** Git, Github, Jira, Visual Studio, IntelliJ, Postman

**Paradigms/Processes:** OOP, Functional Programming, Agile Development, MVC, RESTful APIs, TDD/BDD, CI/CD

## EDUCATION

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### McMaster University

Hamilton, ON

Honours Economics and Computer Science (Hons. BA)

2020 - 2024 Expected

- CS 2C03: Data Structures and Algorithms
- CS 2ME3: Intro to Software Development
- CS 2SD3: Concurrent Systems
- Google Developer Student Club

## PROJECTS

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### Movie Data Layer | *Spring Boot, JDBC, JDBC Template, PostgreSQL, Docker, HikariCP, Flyway*

- Designed a scalable data access layer using JDBC and JDBC Template.
- Leveraged JDBC Template for executing SQL queries against a PostgreSQL database containerized with Docker.
- Configured and integrated HikariCP Connection Pool for optimal performance and scalability.
- Implemented DAOs for encapsulating database operations and providing a higher-level API for accessing data.
- Utilized Flyway for database schema migration and version control.
- Dockerized the application and database for easy deployment and scalability.

### Chat Application | *Kotlin, Spring Boot, RSocket, Spring WebFlux, Kotlin Coroutines*

- Architected a robust chat application with SpringBoot and Kotlin, utilizing H2 for efficient iteration and debugging.
- Engineered an efficient persistence layer with Spring Data and H2 for rapid prototyping and data consistency.
- Optimized application performance and scalability by refactoring to use Spring WebFlux with Kotlin Coroutines.
- Implemented RSocket for efficient, non-blocking communication between microservices.

### BlockWatch | *React.js, Node.js, Express.js, MongoDB, Redux, JWT, bcrypt*

- Built a secure, full-stack Coinbase-inspired web application utilizing modern MVC architecture.
- Engineered a reliable and protected back-end infrastructure using Node.js, and MongoDB to handle user requests.
- Developed RESTful endpoints for secure user login and session management with JWT tokens and bcrypt.
- Utilized React.js and Redux for state management and middleware implementation for a seamless user experience.

## EXPERIENCE

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### Software Engineering Mentor

August 2021 - February 2022

Prograsp

Toronto, ON

- Assisted students in completing an average of 3 software projects, resulting in a 10% increase in course grades.
- Expertly analyzed and debugged code in various programming languages, including JavaScript, Java, C, and Python, resulting in an improved codebase, efficiency and maintainability.
- Implemented agile development methodologies for students and provided clear and actionable suggestions for code optimization, resulting in a more streamlined and cohesive development process.

### Lead Production Manager

September 2018 - March 2020

Junior Achievement Canada

Toronto, ON

- Managed a 12-member cross-functional team and coordinated with four mentors and a branch partner.
- Overhauled the inefficient and unsafe production system, resulting in improved production rates of up to 200%.
- Consistently exceeded sales goals by 20% month to month due to collaborative efforts and organizational impact.