Maneesh **Withanagamage**

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Education

York University	*Toronto, Canada*
Honours Bachelor of Engineering, Specialized in Computer Engineering	*Sep. 2016 - Apr. 2021*

- **Notable Courses:** Software Design Patterns, Relational Databases, Operating Systems, VLSI, Computer Architecture

Skills

Languages:	Java, TypeScript, HTML/CSS, SQL
Software Tools:	Akka, D3.js, React.js, Express.js, Cassandra, Protobufs, PostgreSQL, Jenkins
Hardware:	Cadence Virtuoso, HSPICE, Innovus

Work Experience

Bioinformatics Solutions Inc.	*Waterloo, Canada*
Software Engineer	*Mar. 2022 - Present*

- Designed and implemented backend systems for processing and analyzing mass spectrometry data for proteomics research projects.
- Used Akka actors and streams for efficient concurrent and distributed task management, boosting result generation performance.
- Utilized the Akka toolkit for reactive programming to design and implement scalable, and highly responsive backend systems which dealt with large scale proteomics data sets.
- Developed RESTful APIs, that used Protobufs, to integrate the web application with back-end proteomics data processing pipelines.
- Developed interactive data visualizations using D3.js and other libraries to display results in a user-friendly manner.
- Collaborated with application scientists, R&D and other teams to understand their data needs and translate them into user-friendly features.
- Conducted code reviews and proteomic studies with other coworkers, improving code quality and knowledge sharing within the team.
- Reviewed current and relevant proteomic research to better develop and implement new features.

Loblaw Companies Limited	*Brampton, Canada*
IT Solutions Delivery	*Apr. 2021 - Mar. 2022*

- Assisted with creating, modifying and validating System Requirement and design documents for the Manhattan Active project.
- Developed, configured and tested modules for System Integration Testing (SIT) and User Acceptance Testing (UAT), used for automation.
- Executed System Integration Tests across all active functionality of the Manhattan Active software.
- Built and Validated current state processors, which dictated the new features required for deployment.

4PAY	*Toronto, Canada*
Developer & Technical Analyst (Internship)	*Apr. 2020 - Sep. 2020*

- Designed, Developed and Implemented a proof of concept Block-chain using React and Express.js.
- Proposed AWS Quantum Ledger Database as a solution to increase security of the company ledgers.
- Implemented a working AWS ledger using Quantum Ledger Database (QLDB) to propose the viability of the project to clients.
- Increased efficiency by over 50% by automating the documentation of the company's main system with 500+ API.
- Developed a reporting tool with SQL queries to display different reports to clients.

Projects

Hospital Communication Web Application

Engineering Capstone Project

- Built a real time web service for physicians and nurses to communicate efficiently in a busy hospital environment.
- Designed and implemented a database schema that would capture the complex communication network in hospitals.
- Implemented a RESTful API that allowed the front-end to access and manage data from the Database.
- Implemented privacy and security for SQL injections, Cross-site-scripting and other protocols to be compliant with PHIPA and HIPAA standards.
- Technologies used: React, Express.js, RESTful API, Sass, npm, MySQL, Figma, Postman

My Gaming List

Personal Project

- Designed and Implemented back-end server using Java with Spring-boot.
- Unit tested MVC layers such as the Service layer, DAO layer and Controller Layer using Mockito and Junit5.
- Built and configured Docker container for PostgreSQL.
- Configured database connectivity using JDBC.
- Implemented a RESTful API for data access and management.
- Technologies used: Java, Spring-boot, Junit5, Mockito, Docker, PostgreSQL, Next.js, RESTful API, JDBC