

# Neesh Withanagamage

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## Skills

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**Languages:** Java, Typescript, JavaScript, SQL, NoSQL, CSS

**Frameworks and Tools:** Akka, Cassandra, MySQL, Spring Boot, React Sass, Redux, Postman, Git, Jira, Tailwind

## Experience

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**Software Developer**, Bioinformatics Solutions Inc. – Waterloo, ON

March 2022 – Present

- Designed and implemented event-driven microservices in Java to process large-scale datasets efficiently in a distributed system, ensuring high performance and reliability
- Utilized Akka framework and toolkit for reactive programming to enable scalable data processing workflows and handle high-throughput data requirements
- Optimized data exchange APIs across application layers using Google Protocol buffers (protobufs), reducing data loading times by over 70%
- Implemented and maintained Cassandra repositories to manage large-scale proteomic data, enhancing scalability through sharding and partitioning to ensure fault tolerance and optimize read and write performance
- Successfully migrated 60+ repositories from Cassandra to an abstract access layer, enabling support for both MySQL and SQLite implementations, improving system flexibility
- Effectively collaborate with cross-functional teams including R&D, project managers, and other engineering teams using Agile methodologies to identify, prioritize, and delegate requirements
- Performed code reviews and contributed to software architecture design improvements to maintain code quality and system reliability, leading to an overall reduction of bugs by more than 20%
- Diagnosed and resolved critical software bugs across multiple application layers and interfacing systems, consistently meeting tight release deadlines and ensuring smooth product deployment

**IT Solutions Delivery**, Loblaw Companies Limited – Brampton, ON

April 2021 – March 2022

- Contributed to the creation, modification and validation of the system requirements and design documents for the Manhattan Active project. Reduced more than 40% software defects before being sent for production
- Developed, configured, and implemented Jira modules for System Integration Testing (SIT) and User Acceptance Testing (UAT), establishing a standardized testing approach that reduced manual testing efforts by over 60%
- Conducted comprehensive System Integration Tests on Manhattan Active software functionalities to ensure robustness and reliability
- Built and validated current state processors, integrating new features essential for automation deployment

**Software Developer / Analyst**, 4PAY – Richmond Hill, ON

April 2020 – September 2020

- Designed, developed, and implemented a blockchain network prototype with React and Express.js
- Deployed an AWS ledger using Quantum Ledger Database (QLDB) to demonstrate project viability to clients
- Automated documentation for the main system of over 500 APIs, enhancing efficiency by 70%
- Created a client-specific reporting tool with SQL queries to address reporting requirements

## Projects

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**Note Reading Quiz (Piano)**

Demo

- Designed and implemented the user interface using simple HTML and CSS, ensuring a fast and responsive and visually appealing layout across different devices and screen sizes
- Implemented dynamic functionality and interactivity using JavaScript, allowing users to select a range of notes to be quizzed on and providing real-time feedback on their responses with audio
- Utilized HTML Canvas within the application to provide users with a visual representation of the notes they are being quizzed on

**Hospital Communication Web Application**

- Led the development of a real time web service, using JavaScript, for physicians and nurses to communicate efficiently in a busy hospital environment
- Designed and implemented a SQL database schema, in MySQL, that would capture the complex communication network in hospitals
- Developed a RESTful API to enable seamless interaction between application and the database, enhancing user experience and data accessibility
- Teamed up to develop wireframes and prototypes using Figma, enhancing communication and project goal alignment

## Education

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**York University** – Honours Bachelor of Engineering, Specialized in Computer Engineering

Apr 2021