

Kyle Tan

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TECHNICAL SKILLS

Languages: Java, Python, JavaScript, TypeScript, HTML/CSS, R, C/C++, SQL (MySQL), Kotlin
Frameworks & Libraries: Spring, React, Node.js, Next.js, Express.js, JUnit, Material-UI, FastAPI, Pandas, NumPy, Matplotlib, SciPy, Selenium, BeautifulSoup4, GraphQL, Zustand, Tailwind CSS
Developer Tools: Git, Docker, Jupyter Notebook, AWS, Jenkins, Bash

EDUCATION

University of Waterloo Sep 2021 – May 2026
Bachelor of Mathematics Waterloo, ON

- **Computational Mathematics and Combinatorics & Optimization**
- **Relevant Coursework:** Optimization, Data Structures & Algorithms, Data Analysis, Numerical Computation

WORK EXPERIENCE

Software Developer Feb. 2024 – Aug. 2024
Exavalu Toronto, ON

- Collaborated with a team of 4 developers to design and implement the logical layer of the database for a full-stack web app using **Spring, React, MySQL and Docker**
- Developed comprehensive **JUnit test suites**, increasing **test coverage to 85%** while improving code-stability by integrating automated testing into the CI/CD pipeline
- Achieved a **30%** increase in website performance by implementing pagination and breadcrumb components using **GraphQL, MySQL, and React**
- Refactored 600+ lines of legacy code from **Jakarta Servlet Pages** (JSPs) to accommodate **client-side rendering** pages and components in React, resulting in a **60%** decrease in load times
- Revised and maintained comprehensive **Javadoc** documentation for legacy codebase, improving code clarity by decreasing support requests related to API usage by **20%**

Software Tools Developer June. 2023 – Aug. 2023
Hatch Coding Toronto, ON

- Co-authored on developer tools for providing instructional support for heavy construction equipment by integrating an AI chatbot and a documentation database together
- Contributed to existing documentation and refactored existing comments to improve on accuracy and readability leading to reduced developer onboarding time by **20%**

Project Team Member May. 2023 – Aug. 2023
WE Accelerate Manulife Stream Toronto, ON

- Developed dashboards to measure various KPMs using **React, Node.js, Express.js and MySQL** for ongoing product initiatives
- Increased test coverage to **80%** by implementing a automated API testing framework using **Postman and Jenkins**, leading to an increase in efficiency querying results in SQL by **15%**

PROJECTS

Pose-Pose No Mi | Web App | *Flask, React, MongoDB*

- Developed a full stack application for a gesture drawing tool and to track daily drawing progress
- Utilizes a **Flask API** to interact with Logseq (a PKM app) to write insights and trends based on drawing sessions
- Leverages **Pandas** and **NumPy** for real-time data analysis and heatmap visualization to monitor progress
- Integrated metadata tagging support to **read/write Frontmatter** from images using **pyexiv2**

RAIINet | Game | *C++, Make, Git*

- Co-developed a 2-player game as a final project for a course with **Object-Oriented Programming** concepts and **MVC architecture** based on *Tetris*
- Utilized **Observer** and **Factory design patterns** to model and implement entities efficiently in the game

Scoop Scouters | Android App | *Java, Android Studios, OpenCV, Firebase*

- Developed an **Android app in Java** using **Google Maps API** for users to locate ice cream trucks in real-time
- Leveraged Firebase for backend operations and secure user authentication, enhancing data integrity and storage