



# Alan Wang

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## EDUCATION

### University of Waterloo

Bachelor of Computer Science

Sept 2020 - April 2025

Waterloo, Ontario

**Relevant Coursework:** Data Structures and Algorithms, Operating Systems, Object Oriented Programming, Databases, Compilers

## TECHNICAL SKILLS

**Languages:** JavaScript/TypeScript, Java, Kotlin, Python, HTML/CSS, C++, C, SQL

**Technologies:** React/React Native, Redux, Next.js, Node.js, Express, Spring Boot, Mocha, Tailwind

**Tools:** Git, Docker, Azure, Kubernetes, PostgreSQL, MySQL, MongoDB, Splunk, Jenkins, IntelliJ, Linux

## EXPERIENCE

### Manulife Financial

Cloud Engineering Intern

Sept 2023 - Dec 2023

Toronto, ON

- Incoming on the Cloud Innovations team, developing **cloud computing** services and infrastructure using **Java, Go, Azure** and **Kubernetes** to provide efficient and scalable solutions to internal teams and clients

### Canadian Imperial Bank of Commerce

Backend Developer Intern

Jan 2023 - April 2023

Toronto, ON

- Delivered key digital cards REST API changes to **affect 300,000+ users**, using **Java, Spring Boot** and **MySQL**
- Built and refactored account information backend services and data objects to enable new CIBC Smart Planner Features
- Overhauled **integration test suite** for account information micro-service, **decreasing build times by 17%**
- Debugged and fixed **25+ critical production issues**, analyzing logs in **Splunk** and managing redeployments in **Openshift**

### PointClickCare

Software Engineering Intern

May 2022 - Aug 2022

Waterloo, ON

- Led development of new API to autofill PDF medical forms from XML form data, using **Kotlin** and **Spring Boot**
- Built backend service using **Azure file storage** to save/retrieve PDF templates, for new medical form flow
- Optimized **SQL stored procedures and queries** for manipulating test data, **reducing dev environment startup by 25%**
- Wrote **unit tests** in Kotlin, and **end-to-end tests in Cypress**, increasing **overall test coverage by 20%**

### PBSC Urban Solutions

Software Developer Intern

May 2021 - Aug 2021

Longueuil, QC (remote)

- Developed new UI components and views for bike provider payment flows, using **TypeScript, React Native**, and **Redux**
- Implemented **bluetooth connectivity** for locking e-bikes, using native APIs, garnering **4000+ users in first month**
- Spearheaded new automated end-to-end testing system using **Mocha, Appium** and **WebdriverIO**, speeding up **regression workflow by 30%**
- Wrote **unit and snapshot tests** using **Jest** and **Enzyme**, increasing **overall test coverage from 42% to 70%**

## PROJECTS

### Aitomind | React, Node.js, Express, Azure, MongoDB

- Developed full stack web app that transcribes speech from educational videos and generates conceptual mindmaps
- Built responsive frontend in **React**, and backend services and RESTful endpoints in **Node.js** and **Express**
- Leveraged **Azure Cognitive Services REST APIs**, and **deployed ML model on Azure** to extract connected keywords and concepts
- Connected backend to **MongoDB** to store mindmaps, using **Mongoose** object modelling library to define schema of mindmaps

### No Laughing Matter | Node.js, Express, Websockets (Socket.IO), WebRTC

- Developed **realtime video chat game**, that detects and measures each player's laughter to score a player's jokes
- Utilized **Socket.IO** to manage real time video chat lobbies, and **WebRTC** to facilitate **real time video streaming**
- Integrated a **Tensorflow.js library** to measure user laughter from analyzing facial expression and sentiment

**Personal Interests:** Digital Ethics, Music Production, Guitar, Martial Arts, Philosophy, Art History