

Anish Khurana

Software Development Intern

University of Waterloo - Bachelor of Software Engineering
September 2021 - April 2026



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Skills

- Programming Languages: Python, C++, C#, C, JavaScript, TypeScript, Java, HTML/CSS, PHP, GraphQL, LaTeX, Motoko
- Technologies: PostgreSQL, MongoDB, Node.js, Unity, Git, Unix, GCP, Raspberry Pi, Expo, Blockchain, Firebase, Supabase, Android, iOS, Bash
- Libraries/Frameworks: React, React Native, Python Flask, jQuery, Jest, Pytest, Scikit-Learn, TensorFlow

Work Experience

VCT Group, Software Engineering Associate - Full Stack Development

May 2024 - August 2024

- Lead the refactoring of a major website section with a new UI and updated endpoints, utilizing **TypeScript** and **React** for the frontend and **Java** for the backend, which is expected to reduce the technical debt by **30%**
- Modularize the codebase by utilizing reusable single select and multi select React components created with the **Material UI** (MUI) Library's Autocomplete component, enhancing code quality and improving maintainability by **20%**
- Utilized **domain-driven design** (DDD) principles to restructure the application architecture, resulting in an increase in **code maintainability** and improved alignment between the technical design and business requirements
- Developed a comprehensive data flow diagram in groups of two for the full stack application, enhancing onboarding efficiency by providing new employees with clear guidance on system architecture and processes

Microart Services Inc, Software Engineering Intern - Mobile Development

September 2023 - December 2023

- Significantly improved data retrieval speed from Supabase by **33.45%**, whilst maintaining the accuracy of the searches, through the innovative use of **PostgreSQL's** remote procedure calls (RPC), enhancing system efficiency
- Worked on an advanced web scraper in **JavaScript**, successfully extracting over **100,000** records with complex filtering from a website and storing them in a PostgreSQL database
- **Developed** a user reviews feature, elevating user accessibility and experience across our diverse and extensive customer base
- Implemented key features and resolved critical bugs for 2 **Bluetooth-enabled applications** using **React Native**, maintaining efficient data handling with **Firebase** and **Supabase** databases

Okos Smart Homes, Software Development Intern - Web/Mobile Development

January 2023 - April 2023

- Worked on the development of a status icons feature for a **Business-to-Business (B2B) application** using the React-Admin library and the **RESTful API** endpoints created using **Python Flask**
- Implemented a forgot password feature for the website and mobile app in **2 weeks**, following proper authentication guidelines
- Developed and maintained the UI of the website and mobile app for **20+ project managers** and **200+ technicians**
- Continuously tested and debugged new features to enhance user experience

eButterfly, Project Team Member - Web Development

May 2022 - August 2022

Waterloo Experience (WE) Accelerate Program - Manulife Modern Web Application Design Stream

- Completed approximately **100 hours of workshops** provided by Manulife, learning essential skills such as **JavaScript** and **Jest**, as well as **Event-Driven Architecture** and **Test-Driven Development (TDD)**
- Collaborated with a team of 5 developers to build an administration and customer-facing webpage for **50+ users** as part of the eButterfly Labs Project
- Utilized **TypeScript** and **React** to structure the webpages and interact with the RESTful API using Python's **FastAPI**

Projects

Power Code (devpost.com/software/power-code)

- Created a 1v1 multiplayer coding game for **Hack the North**
- Utilized React and **Material UI** to implement the frontend and deployed the backend server on **Convex**
- The code checks from the generated test cases were performed by a FastAPI server that is hosted on **Heroku**

Trivia King (github.com/programmer812/Trivia-App)

- Created a trivia app using **React Native** and **SQLite**, which is released on the **Google Play Store**, where users can attempt quizzes over multiple topics and their scores will be recorded in the device's internal storage

Blog Website (github.com/programmer812/Blog-Website)

- Created a full-stack blog web application to allow users to anonymous post their thoughts on a public forum
- Used **HTML/EJS** and **CSS** to implement the structure and styling as well as **Node.js** and **MongoDB** to for the server

Math Notes to Latex Converter - Course Design Project (github.com/rohanvedula/PaZaR)

- Created a python program in a group project that uses **Raspberry Pi**, **OpenCV**, and **OCR** to capture the images and convert math equations into **LaTeX** characters as well as the PyLaTeX library to compile the LaTeX PDF documents

Realm Rush (github.com/programmer812/Realm-Rush-Game)

- Used **C#** and the **Unity Game Engine** to create a tower defense game where the enemy deduces the shortest path possible using the Breadth First Search algorithm