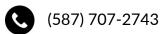# Anish Khurana

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, FastAPI, jQuery, Jest, Pytest, Scikit-Learn, TensorFlow, Material UI

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 each of the questions' 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