

# Ankush Kumar

a227kuma@uwaterloo.ca | [Linkedin](#) | [Portfolio](#) | [Github](#)

## EDUCATION

### University of Waterloo

Waterloo, ON

*Honours Bachelor of Computer Science*

*October 2022*

- **Coursework:** HCI, Applied Cryptography, Computer Security and Privacy, Operating System, Algorithms, Data Structures, User Interfaces, Logic and Computation, Object-Oriented Programming, Probability
- **Awards:** University of Waterloo Presidential Scholarship

## EXPERIENCE

### NexDew Technologies

November 2022 - January 2024

*Software Developer*

*Remote*

- Developed and maintained **30 RESTful APIs** for "Sumaitriherp" hospital-based web application, handling CRUD operations, user authentication, patient management, & appointment scheduling, **using Spring Boot** with Spring Data JPA, Spring Security, Spring MVC, and MySQL database, resulting in streamlined processes
- **Improved web response time by 15%** through SQL query optimization and API endpoint refactoring
- Implemented data validation & error handling, **reducing errors by 25%** & ensuring accurate data processing

### SOCA

May 2021 - August 2021

*Web Developer*

*Waterloo, ON*

- Built an interactive website in **React** and **Redux** for a cricket league played in Ontario by 20 teams every year
- **Improved load time by 15%** by managing website's state with redux and integrating lazy loading of images
- Implemented user-centered design, applied multi-page layout, **DRY principle** using **React-Bootstrap and CSS**
- Built a scalable UI capable of handling big traffic load by reducing UI re-renderings which **decreased data processing cost by 20%**

### PetroWagon

August 2019 - January 2020

*Software Engineer*

*Waterloo, ON*

- Developed an **android app** for an online fuel delivery service-based start-up from scratch
- Programmed app's local database using **Android Room** and implemented **SQL** queries to store mutable live data
- Built **onboarding flow** to collect user information for customized suggestions
- Maintained structured code using **MVVM architecture** to enhance reusability and optimized app performance

### Davis Centre Library

January 2022 - August 2022

*IT Specialist (Part-time)*

*University of Waterloo*

- Monitored & troubleshoot network security issues using **Nessus** and **Nmap**, responding to security threats
- Maintained library's **Sophos firewall** and **virtual infrastructure**, resolving issues for seamless operations
- Conducted ongoing **Linux server maintenance** to ensure reliability and security for library systems

## PROJECTS

### VirtualHaus | Kotlin

- Designed and developed an **Android Application** written using Kotlin following **MVVM** design pattern
- The app lets you keep track of items in the house, book quiet times, add events, check expenses, and more
- Architected using **Client-Server** model where live data is handled through **Firebase Realtime Database**

### Ray Tracer | C++

- A C++ program written to render and produce **highly realistic images** of geometric data like spheres in a scene
- Provided multi-threading support using **OpenMP API** and implemented advanced features like **anti-aliasing**

## PUBLICATIONS

- **Enabling Brainstorming across Time Zones** | Addresses a tool-suite designed for asynchronous collaboration

## TECHNICAL SKILLS

**Languages:** Python, C++, Java, XML, Kotlin, C, JavaScript, SQL, Scheme, CSS

**Databases and Tools:** MySQL, OracleDB, Firebase, Hibernate, Git, Bash, AWS, Docker, Heroku, Maven, Postman

**Framework and Libraries:** React, Redux, Node.js, Spring Boot