

Ankush Kumar

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EDUCATION

University of Waterloo

Waterloo, ON

Honours Bachelor of Computer Science

August 2022

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

TECHNICAL SKILLS

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

Databases and Tools: MySQL, OracleDB, Firebase, Hibernate, Git, Bash, Docker, Heroku

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

EXPERIENCE

NexDew Technologies

September 2021 - January 2023

Software Developer

Remote

- Contributed to the development of **RESTful APIs** and key features of various web applications
- **Enhanced response time by 15%** and significantly improved web functionality by performing detailed reviews
- Worked with **Hibernate** ORM and **Spring Boot** framework in Java using **MySQL** database over 3 work streams in a **Microservice** architecture

SOCA

June 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%**

Petro-Wagon

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

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**

Game of Battleship | Kotlin

- Created a **Desktop Application** written in **Kotlin**, using **Javafx toolkit** following **MVC** design pattern
- Implemented User Interface concepts such as **Graphics**, **Animation**, **Hit-Testing**, and **Transformations**

Healthy 24/7 | Java, XML

- Developed an **Android App** using Java and XML that lets you set up a diet chart, calculate BMI and BMR
- Implemented data storage using **SQL database** that lets user create log of their BMI/BMR at a specific time
- Integrated USDA Nutrition **Database API** using Retrofit **HTTP client library** to search food nutrition

RayTracer | C++

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

PUBLICATIONS

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