

Ankush Kumar

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EDUCATION

University of Waterloo

Waterloo, ON

Honours Bachelor of Computer Science

October 2022

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

EXPERIENCE

BH Frontier Solutions Inc

July 2024 - Present

Computer Vision R&D Engineer

Richmond Hill, ON

- Enhanced CV model accuracy by 20% through optimization using **PyTorch** for improved performance
- Streamlined deep learning pipeline processes, including data pre-processing, training, & evaluation for efficiency
- Achieved a **30% reduction in processing time** by implementing best practices for model deployment

ProgramPro

January 2024 - July 2024

Software Developer

Waterloo, ON

- Designed authorization & authentication services using **OAuth 2.0** & **JWT**, achieving **20% faster logins**
- Collaborated on scalable **MongoDB** backend solutions for course management, **boosting throughput by 15%**
- Developed **10+ RESTful APIs** using the **Stripe** JavaScript library for seamless payment processing integration

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 using **React** and **Redux** for a cricket league, used by more than 200 users, with features including user profiles, user & team stats, previous scorecards and a league leaderboard
- **Improved load time by 15%** by managing website's state with redux and integrating lazy loading of images
- Built a scalable UI capable of handling big traffic load by reducing UI re-renderings which **decreased data processing cost by 20%**

PROJECTS

CatVsDog [🔗](#) | Jupyter Notebook

- A simple computer vision **classification model** that predicts if the object in the image is a cat or a dog
- Utilized **FastAI** library with pretrained **ResNet34** CNN and the Oxford-IIIT Pet Dataset

Wallet [🔗](#) | Java

- Created web application for user registration, authentication, fund transfers, withdrawals, and deposits
- Implemented core features using **Servlets**, **Sessions**, **Persistence API**, and **Hibernate ORM**
- Managed **MySQL database** for secure and efficient data storage and retrieval operations

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, Bash, Scheme, CSS

Databases and Tools: MySQL, OracleDB, Firebase, Git, Docker, Maven, Postman, Jupyter Notebook, JSON

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

Architecture Styles: Client-Server, MVC, MVVM, Microservices, HTTP