



# ZHONGHAO (RICHARD) YANG

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## EDUCATION

### University of British Columbia

Sep 2020 – May 2024

Bachelor of Science in Computer Science, minor in Data Science

Vancouver, BC

- Received Trek Excellence Scholarship (top 5%), and Faculty of Science International Student Scholarship.
- Coursework: Software Engineering (97%), Data Structures and Algorithms (94%), Computer Systems (92%)
- GPA: 4.33/4.33 (91%)

## EXPERIENCE

### IBM

May 2022 – Aug 2022

Backend Developer Intern

Markham, ON

- Contributed to backend microservices using **Java** and **Maven** focusing on **AI/ML** features in IBM Cognos Analytics.
- Integrated Cognos Conversation Assistant into Microsoft Teams by building a chatbot using **TypeScript** and **Node**.
- Trained **NLP** models and integrated newer versions of Core NLP package that eliminated all the critical vulnerabilities.
- Improved and maintained the visualization recommender service, and created **JUnit** tests to ensure full test coverage.
- Created automation test cases based on existing manual test cases using **JavaScript** and **Selenium**.
- Utilized **Jenkins** for **CI/CD** to automate the process of loading the latest build and investigating build failures.

### CAE

Jan 2022 – Apr 2022

Full Stack Developer Intern

Richmond, BC

- Developed and maintained cloud-based SaaS solution for managing aviation training records using **C#**, **ASP.NET** and **JavaScript** for web application, and **Xamarin.iOS** for mobile application.
- Rewrote the existing **JavaScript** and **jQuery** web app frontend with **React** and **Bootstrap** as a prototype.
- Contributed extensively to developing many new features, including utilizing **Azure Functions** and **Azure Service Bus** to send user email notifications with data queried using **Entity Framework Core**, and added unit test coverage.
- Refactored and improved the performance by **80%** for updating all user's data on mobile app with multi-threading.
- Collaborated and communicated with other members frequently, resulting in more efficient deliveries of sprint tasks, and actively took part in code review, demo new features.

### UBC

Jan 2021 – present

Undergraduate Teaching Assistant

Vancouver, BC

- Taught various Computer Science, Data Science and Statistics courses, including an upper-level Software Engineering course that instructed specification, design, validation, evolution and construction of modern software systems.
- Received perfect evaluation scores from 100+ students in the most recent semester in categories including teaching ability, preparedness, and communication.
- Taught large groups of students, resolved conflicts in project groups, and relayed student needs to professors.

## PROJECTS

### Werewolf | JavaScript, React, Express, Node, MongoDB, Bootstrap, Firebase

Feb 2022

- Designed and developed a full-stack web application using **MERN** stack for a board game with 6-12 players.
- Implemented RESTful APIs allowing the game to actively make CRUD operations for users and rooms.

### Insight UBC | TypeScript, JavaScript, Express, Node, HTML, CSS, Mocha, Chai

Dec 2021

- Built a query engine from scratch for the backend using **TypeScript**, **Express**, **Node** that is able to process information from metadata and response to queries with the required EBNF form
- Integrated Google Map to the frontend to render the shortest path between classrooms within UBC.
- Implemented Test Driven Development using Mocha and Chai, and used dynamic testing.

## TECHNICAL SKILLS

**Programming Languages:** Java, C#, C++, C, Python, TypeScript, JavaScript, PHP, SQL, HTML, CSS, Bash, R

**Frameworks:** React, jQuery, Express, Node, Django, ASP.NET, Entity Framework Core, Xamarin.iOS, MongoDB, MySQL, Oracle, Selenium, JUnit, Mocha/Chai

**Tools:** Git, Docker, Jenkins, Azure, AWS, Postman, IntelliJ IDEA, VS Code, Visual Studio