

Ritchie Xia

3rd Year Computer Engineering Student | University of British Columbia

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EDUCATION

University of British Columbia, BAsC Computer Engineering

Expected Graduation: **May 2024**

Co-op: Available for 4-16 months beginning May 2022

CGPA: 4.0, Dean's Honour List

SKILLS

Languages: C/C++, Java, JavaScript, Python

Frameworks: React.js, HTML/CSS, JUnit, Node.js, MongoDB

Tools: Git, GDB, Bash/Command Line, PowerShell, Windows, Linux, Figma

PROJECTS

Spacestagram (<https://github.com/ritchiexia/Spacestagram>)

Jan 2022

- Designed and developed a responsive front-end app that displays 10 posts from NASA's Astronomy Picture of the Day Archive using **HTML**, **CSS**, **JavaScript**, **React.js**, **Material-UI**, and **Polaris**
- Created a mockup design of UI with **Figma** to prototype features and improve user experience
- Integrated **Axios** requests and **React Router DOM** to dynamically load posts

OS161 Kernel

Sep – Dec 2021

- Implemented synchronization primitives, system calls, virtual memory, and thread management using **C** and **MIPS R3000 assembly**
- Exercised **multithreading** techniques with synchronization principles to improve speed of operation
- Used **GDB** to debug issues such as deadlocks, system faults, and memory leaks to ensure code quality

BookCards (<https://github.com/ritchiexia/book-recommender>)

Mar – May 2021

- Developed a **React** app with a **MongoDB** database in a group of four recommending books based on user preference
- Programmed two machine learning models using **Python**, **Flask API** and **PyTorch** to allow users to view unique book recommendations updated with every user input

Find Free Space (<https://github.com/ritchiexia/FindFreeSpace>)

Jan 2021

- Created a web app using **Python** and **OpenCV** to periodically detect body count in a room from a camera input
- Utilized a **MongoDB** database to store room occupancy levels updated using a Python script

ENGINEERING STUDENT TEAMS

UBC Rocket

Sep 2019 – Apr 2020

Internals Subteam Member

- Collaborated in a multi-disciplinary team to design a liquid-fuel rocket using the collaborative environment **GrabCAD**
- Efficiently communicated with subteams to design the frame holding together other components of the rocket, including the parachutes and avionics board

OTHER WORK EXPERIENCE

Trek Bicycle Corporation, Burnaby, BC

Jul – Oct 2020

Sales Associate

- Provided a personal shopping experience by qualifying customer needs and finding ideal products
- Effectively communicated customers' technical issues with the technician team for bicycle repairs and spare parts

SFU Camps, Burnaby, BC

Jun – Aug 2019

General Instructor of Computers

- Formed lesson plans for basic computer programs such as Scratch, **HTML**, the Adobe suite (**Photoshop**, **After Effects**), and SketchUp
- Taught and supervised 20-25 campers aged 10-12 for in class activities and outdoor recreation time