Ritchie Xia

Third Year Computer Engineering Student | University of British Columbia

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TECHNICAL SKILLS

Languages: Java, C, HTML, CSS, JavaScript (React), Python, OpenCV, SystemVerilog, Verilog, ARMv7, x86-64, PicoBlaze

Software Tools: Git, MATLAB, Intel Quartus, ModelSim, Node

PROJECTS

BookCards

CPEN 291 Project (https://github.com/ritchiexia/ book-recommender) **Mar – May 2021**

- Developed a web app in a group of 4 using Python, React and **MongoDB** that recommends books based on user preference
- Used an embedding model to pair new users with existing users of similar taste, followed by reinforcement learning to actively update the user vector and the user's recommended books

Find Free Space

nwHacks Project (https://github.com/ritchiexia/FindFreeSpace) **Jan 2021**

- Created a web app using **Python** and **OpenCV** for upper body detection from a camera input and returns a count to a **MongoDB** database to inform users of a room's occupancy level
- Won Best Domain Registered with Domain.com award

ENGINEERING STUDENT TEAMS

UBC Rocket

Internals Subteam Member **Sep 2019 – Apr 2020**

- Integrated core components of rocket into an efficient, functional design
- Used **SolidWorks** to design and perform force analyses on mid-assembly of rocket including main and drogue parachute bays, spoked plates, and threaded rods providing room for avionics board to be housed

OTHER WORK EXPERIENCE

Trek Bicycle Corporation

Sales Associate, Burnaby, BC **Jul – Oct 2020**

- Provided a personal shopping experience by qualifying customer needs and finding ideal products

SFU Camps

General Instructor of Computers, Burnaby, BC **Jun – Aug 2019**

- Supervised, formed lesson plans, and taught basics of computer programs such as **Scratch**, **HTML**, the Adobe suite **(Photoshop, After Effects)**, and **SketchUp** to groups of about 25 campers aged 10-12

EDUCATION

University of British Columbia, BASc Computer Engineering **Expected Graduation: April 2024**

Relevant Courses: Operating Systems **(C)**, Principles of Software **(Java)**, Digital Systems Design **(SystemVerilog)**