

VICKI FU

UBC Computer Engineering Student

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SKILLS

Languages | C/C++, Java, Python, HTML/CSS, JavaScript, SQL

Frameworks & Tools | Git, Flask, React.js, Node.js, Bootstrap, JQuery

Other | Automated/Unit Testing, Agile/Scrum, JIRA

EXPERIENCE

Sophos | Software Engineer Co-op

May 2019 – Sept 2019

C/C++, Python, Lua, Git, JIRA, Agile, Jenkins, Coverity, PyTest, Qt

Vancouver, BC

- Leveraged cybersecurity and networking concepts to develop the Intrusion Prevention System (IPS): an advanced network security system that detects, alerts and prevents vulnerability exploits
- Introduced new detection types that do not interfere with network traffic by extending the C/C++ intrusion detection system to process additional properties in its policy; Allowed SophosLabs to collect detection telemetry without disrupting user experience and included safety driven code to prevent any misuse of this feature
- Implemented C++ code to extract threat detection events received by IPS and propagate them as attack warnings to the UI; Coordinated with international development teams to incorporate Lua code in IPS that interacts with their APIs to establish communication with the UI
- Developed a C++ Qt desktop tool simulating future/in progress features; Enabled developers to begin working on dependent code 1 month in advance
- Designed, implemented and maintained automated Python tests to extend functional coverage on all platforms

UBC Code the Change Foundation | Web Developer Member

Jan 2019 – May 2019

HTML/CSS, SQL, JavaScript, Bootstrap

Vancouver, BC

- Implemented the front end of a dynamic website that maps Vancouver housing rental information, features user accounts and processes tenant eviction/rental requests using HTML/CSS and JavaScript
- Built a custom SQL and PHP plugin to streamline the site database management process

PROJECTS

Coursharer

Python, Flask, Jinja, SQL Alchemy/SQLite, JQuery, HTML/CSS, Bootstrap

- Built an online course sharing platform using Flask that allows users to easily create and search for courses
- Designed a RESTful backend server enabling data retrieval by JQuery plugins and course/user information storage
- Created from scratch, a sleek user interface with affordances to enhance navigability and overall user experience

Clash of Snakes Multiplayer

JavaScript, Node.js, Express.js, Socket.IO, HTML/CSS

- Developed a 2 player online game with synchronized keyboard controlled movements and food spawns using Socket.IO to establish bi-directional communication between web clients and servers
- Players enter a username on website load and select a difficulty level which dictate speed and points target

Algorithmic Art Image Editor

C++

- Applied image compression, space partition and statistical algorithm optimization concepts to recreate images with a blocky artistic effect
- Generated animation GIFs of flood filling a closed region of an image with patterns using graph search algorithms
- Rendered the results of applying filters/watermarks to images and weaving/rolling/reversing image block chains by manipulating pixel properties and doubly linked lists

Smart Text Similarity Analysis

Java, Microsoft Azure API, JUnit

- Measured textual similarity and overall document tone using a combination of Azure text sentiment scores and divergence metric computations
- Split a list of documents into groups by author even without supplying any insight into who the author is up front

EDUCATION

University of British Columbia | B.ASc in Computer Engineering

Sept 2017 - May 2022

A- Grade Average

Vancouver, BC

- Junior/3rd year student, enrolled in a Co-op program