

Ali Imad Hasan

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EDUCATION

UNIVERSITY OF BRITISH COLUMBIA

BACHELOR OF COMPUTER SCIENCE
2023 - Present | Vancouver, BC

Relevant Coursework

CPSC317 • Computer Networking
CPSC304 • Relational Databases
CPSC310 • Software Engineering
CPSC213 • Computer Systems
CPSC210 • Software Construction
CPSC221 • Data Structures and Algorithms
CPSC320 • Algorithm Design and Analysis

UNIVERSITY OF TORONTO

BACHELOR OF SCIENCE
MOLECULAR BIOLOGY
Graduated 2020 | Toronto, ON

Relevant Coursework

CSCB20 • Databases and Web Applications
CSCA48 • Introduction to Computer Science II
CSCA20 • Introduction to Programming

SKILLS

LANGUAGES

Python • Java • JavaScript • TypeScript • Bash

STACKS / LIBRARIES

Node.js • MongoDB • SQL • ExpressJS • React
• Next.js • Firebase • CSS • Qt

PARADIGMS / PRINCIPLES

MVC • Object-oriented programming •
Automation • CI/CD • Scrum based
management • OS shell scripting

TOOLING / VERSION CONTROL

Git with GitHub • Docker • Jira • SaaS
Deployment (Heroku, Vercel, etc.)

WORK EXPERIENCE

NETGEAR | SOFTWARE ENGINEER CO-OP

Sep 2023 - Apr 2024 | Richmond, BC

- Worked and communicated with senior engineers to accelerate development on a hardware automation testing suite, designing and implementing over **thirty-five feature requests** in Python
- Ensured **strong code quality** and consistent feature implementation using **Agile** principles via **Jira ticket management** and **disciplined code review**
- Implemented drivers to accomplish **automated configuration and recording** of instruments ranging from tens to hundreds of thousands of dollars
- Refactored **over 26000 lines of code**, applying compositional object oriented design to ensure a cleaner and more maintainable front end codebase via **Qt** library integrated with a **Model-View-Controller** paradigm

THE FEHLINGS LAB | CO-OP RESEARCH STUDENT

Sep 2018 - Apr 2020 | Toronto, ON

- Worked in a team of twelve primarily on three research projects centered on **stem cell treatment of cervical spinal cord injury**, conducting experimental protocols and subsequent **statistical analysis and data visualization** on over 200 test subjects
- Developed a **Python 3 based tool and internal library** intended for scoring and analysis of kinematic data collected across three years, leveraging **NumPy, Pandas, SciKit Learn and Matplotlib** to pre-process hundreds of thousands of high speed frame footage and thousands of behavioural score records

ENVIRONMENT CANADA | JUNIOR SCIENTIST

May 2017 - Sep 2017 | Toronto, ON

- Extended and maintained library of Bash and Python scripts with NumPy, Matplotlib, and an in-house pre-processor package to **download, refit, visualize and analyze** very large datasets (>100 GB)

HIGHLIGHTED PROJECTS

CODELENS

Stack: Java • Swing • JUnit

- Large language model powered
- Designed with **object oriented principles** and **model-view separation** in mind, this project can be built for either **graphical** or **command line** use

JRUGIO

Stack: Java • Lanterna (curses-like) • OOP

- ASCII based dungeon crawler video game leveraging **binary space partitioning** to generate levels as well as **Dijkstra's, A*, and Bresenham's** algorithms to integrate entity **artificial intelligence**

ACADEME

Stack: React • Firebase • Express.js • JavaScript

- Lead a hackathon team of a five through the creation of an educational social media platform featuring an event planner, user profiles, and **video + text lobby chat**, placing first during BCS Hacks 2023.
- Primary responsibility was ensuring good source control management, back end app routing, interaction with Firebase for **OAuth2 authentication and persistence**