Karen **Hong**

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Experience

Part-Time Research Assistant, The Social Health Lab — *Vancouver, Canada*

Skills: Android development — *Sept. 2019 - Present*

- Worked on an Android application used for collecting survey and phone usage data for the Smart-phone Sensing Study
- Re-designed the application so that it can generically support other survey based studies

Software Development Intern, Verity Studios — *Zürich, Switzerland*

Skills: C++, Qt, Python, Gerrit, Git — *Sept. 2018 - Apr. 2019*

- Designed and implemented a music managing application as a part of the operational software suite of a drone show system
- Developed features for various tools and applications by writing efficient and well-structured production code
- Assisted in client demonstrations, conducted experiments, and collected data from the drones and software system

Software Developer, Awake Labs — *Toronto, Ontario*

Skills: Android Development, Flask, Python — *May 2017 - Aug. 2017*

- Engaged in discussions concerning the design of the software platform including database and API design
- Prototyped an Android application that interacts with the Google Speech API and implemented supporting API calls

Junior Software Developer, Fatigue Science — *Vancouver, British Columbia*

Skills: TypeScript, JavaScript, C++, Qt, AngularJS, Ionic, Bitbucket, testing — *Sept. 2016 - Apr. 2017*

- Implemented features, re-factored code, and debugged a hybrid mobile application
- Assisted in testing and validating an evolving web application and mobile platform
- Constructed and deployed a cross-platform Qt application designed using object oriented principals

Education

The University of British Columbia — *Vancouver, British Columbia*

BSc in Computer Science — *Expected May 2020*

Relevant Courses: Operating Systems, Programming Languages, Algorithm Design and Analysis, New Venture Design

ETH Zürich — *Zürich, Switzerland*

Semester exchange in the department of Computer Science — *Feb. 2018 - Aug. 2018*

Relevant Courses: Introduction to Machine Learning, 3D Vision, Ubiquitous Computing

Projects

Dragon Adventure Bonanza — *UBC*

2D platform game using C++ and OpenGL — *Dec. 2019*

- Created a multi-level desktop game including enemy AI, animation, physics-based movement, and collision detection
- Implemented core game components such as the game engine and rendering system
- Elected best game by an industry jury and most fun by a popular vote
- Managed the project and coordinated development with 5 other programmers

A Basic Kernel — *UBC*

Bochs IA-32 (80x86) simulated kernel using C and X86 assembly code — *Nov. 2019*

- Implemented a basic kernel capable of memory and process management, time-sharing, interprocess communication, and device and keyboard interactions

Global Alignment of Meshes on the Hololens — *ETH Zürich*

Mesh Registration Analysis for the Hololens — *June 2018*

- Evaluated the performance of the the Guaranteed Outlier Removal algorithm (GORE) and RANSAC by analysing alignment errors and run-times on meshes generated by the Microsoft Hololens

The Adventures of Jack O'Lantern — *UBC*

Platform game in Elm — *Nov. 2017*

- Leveraged a functional web language to create a game including randomly generated platforms and obstacles