

# Karen Hong

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## Experience

### Part-Time Research Assistant, The Social Health Lab

Vancouver, Canada

RESEARCH LAB IN THE DEPARTMENT OF PSYCHOLOGY AT THE UNIVERSITY OF BRITISH COLUMBIA

Sept. 2019 - Present

Skills: Android development

- 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

BRINGING TOGETHER TECHNOLOGY AND THE ARTS WITH INDOOR DRONE SHOW SYSTEMS.

Sept. 2018 - Apr. 2019

Skills: C++, Qt, Python, Gerrit, Git

- Developed features for applications used in the operational software suite of a drone show system
- Assisted in client demonstrations, conducted experiments, and collected data from the drones and software system

### Software Developer, Awake Labs

Toronto, Ontario

SUPPORTING PEOPLE WITH INTELLECTUAL AND DEVELOPMENTAL DISABILITIES USING TECHNOLOGY

May 2017 - Aug. 2017

Skills: Android Development, Flask, Python

- 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

A WEARABLES COMPANY FOCUSED ON USING PREDICTIVE FATIGUE TO OPTIMIZE PERFORMANCE AND MINIMIZE RISK.

Sept. 2016 - Apr. 2017

Skills: TypeScript, JavaScript, C++, Qt, AngularJS, Ionic, Bitbucket, testing

- Implemented features, re-factored code, and debugged a hybrid mobile application
- Constructed and deployed a cross-platform Qt application designed using object oriented principals

## Education

### University of British Columbia

Vancouver, British Columbia

BSC IN COMPUTER SCIENCE

Expected May 2020

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

### ETH Zürich

Zürich, Switzerland

SEMESTER EXCHANGE IN 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 OPENGGL

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 developers

### 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 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, enemy units, and score keeping