

Jung-Han Han

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HIGHLIGHTS OF QUALIFICATIONS

- Experience in research – **Ph.D.** in Computer Science
- Experience in **C, C++** development – Research projects during Ph.D.
- Experience in working on various **network protocols**
- Experience in web development – Completed web development courses at Camosun College
- Legally entitled to work in Canada

EXPERIENCE

Research Assistant

Mar 2012 – Feb 2020

Mobile Networking Laboratory, Yonsei University, Seoul, Korea

- Developed an attitude to figure out solutions with patience
- Development experience
 - **C** – Experienced modifying a **Linux wireless kernel driver** (i.e., ath9k)
 - **C++** – Experienced writing NS-3 scripts and modifying **NS-3 network simulator**
- Research project experience – Industry-university collaborative projects with Samsung Research
 - Collaborated with multiple research teams
 - Implemented WiFi AP selection algorithm for WiFi network topology optimization
 - Evaluated traffic scheduling algorithms running on TelosB wireless sensor modules
 - Tested link switching algorithms between Wifi and Bluetooth or 802.15.4

EDUCATION

Ph.D, Computer Science

Mar 2012 – Feb 2020

Yonsei University, Seoul, Korea

- Coursework
 - 54 total credit hours
 - GPA 4.12/4.30
- Research Area
 - Mobile Networking
- Relevant Publications
 - J. Han and S. Han, "Hidden terminal-aware access point selection for IEEE 802.11ah networks", Computer Communications, 2021
 - Worked on NS-3 simulator in **C++**
 - J. Han and S. Han, "Non-Intrusive Estimation of Available Throughput for IEEE 802.11 Link", Computer Networks, 2018
 - Devised a WiFi throughput estimator based on wireless packet sniffing using **libpcap library (C++)**
 - J. Han, H. Choi, and S. Han, "Acknowledgement Corruption: A New Aspect of Physical Layer Capture in IEEE 802.11 Networks", Wireless Communications and Mobile Computing, 2018
 - Modified a **Linux wireless kernel driver (written in C)** to adjust parameters of wireless devices

Diploma, Information and Computer Systems

Sep 2020 – Aug 2022

Camosun College, Victoria, BC, Canada

- Achievements
 - 84 total credit hours
 - GPA 8.92/9
 - Computer Science International Student Award
 - International student with the highest academic standing
- Relevant Courses

- C++ - Programming from C to C++
- Python - Network Programming, Capstone Project
- JavaScript – Web Scripting, Web Applications, Web Services, Special Topics in Computing
- ReactJS – Web Applications, Web Services
- Java - Algorithms and Data Structure, Algorithms and Programming
- Relational databases – Database Concepts, Database Systems Management, Applied Computing Project
- AWS – Special Topics in Computing
- RESTful API – Web Services, Special Topics in Computing

RELEVANT PROJECT

Portfolio website

<https://junghanhan.com>

- A personal portfolio website built with frontend and backend modern web technologies
 - Developed by using **React.js, Next.js, Express.js, MongoDB, Node.js, JavaScript**
 - Incorporated with **RESTful API**
 - Deployed in **AWS EC2**

Forest cover map Segmentation tool

<https://github.com/junghanhan/forest-map-segmentation>

- A software tool that extracts data as ESRI Shapefile, which is an analysis-ready vector data format used by GIS applications, from historical, scanned, forest cover maps (i.e., raster images)
- Used technologies
 - **Python** – Manipulating geometric vector objects
 - **Deep Learning – Keras-OCR** for detecting and recognizing labels on the maps

The Cup Emporium: E-Commerce website

<https://github.com/junghanhan/cup-emporium>

- An E-Commerce website for local business selling hand-made ceramic cups and seeking to open distribution to North American market.
 - Developed by using **JavaScript, PHP, MySQL**
 - Incorporated with **Stripe** payment method API

SKILLS

- Web front-end development – JavaScript (ES6+), React.js, Next.js
- Web back-end development – RESTful API, Node.js, Express.js, MongoDB, Oracle Database, MySQL
- Cloud computing – AWS EC2, Lambda, RDS, DynamoDB, API Gateway, S3, Serverless architecture
- Programming language experience – C, C++, JavaScript, Python, C#, PHP, Java, Swift
- Linux experience – Experienced modifying a Linux wireless kernel driver
- Methodologies – Agile, Scrum
- Other – JWT, Git