

HARRIS LUO

1B SOFTWARE ENGINEERING

Student# 20831389

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Technical Skills

LANGUAGES

Python

Java

C

C++

HTML

JavaScript

TECHNOLOGIES

NumPy

TensorFlow

Dialogflow

Git

Django, Flask

Ubuntu

OpenStack

Cloud Computing
Infrastructure

LAN
Infrastructure

Android

Interests

Classical Music

Rubik's Cube

Minecraft Redstone

HK Style Mahjong

Work Experience

Bell Canada

Network Technician Intern

Mississauga, ON

July—August, 2019

- Efficiently managed and reconfigured a section of the Top-of-Rack (ToR) spanning network in a lab environment, facilitating a **cloud infrastructure expansion**.
- Swiftly picked up the fundamentals of **network architecture** to organize network sessions, VLANs, and IP routing to fulfill the team's demands.
- Monitored cloud server traffic using the **OpenStack Horizon** interface to detect and eliminate errors in network routing.
- Demonstrated meticulous **attention to detail** when taking inventory and rerouting cables as part of the expansion of the team's cloud computing network.

Software Developer Intern

July—August, 2018

- Developed a web application with **HTML** and **JavaScript** to automate **radio frequency** testing, with initial plans to be implemented for an incoming wave of **5G** wireless technology.
- Extensively tested the **quadAtten** module, a series of programmable radio attenuators, to ensure compatibility between the web application and the module's **API**.
- Built a web stack on an **Ubuntu server** using the **Python-based Flask** microframework to host the web application for public use.
- Deployed the final product on **Kubernetes** with enterprise **GitLab CI/CD** pipeline support.

Projects (on GitHub)

iFollow

October—December, 2019

- Built a smart storage cart that follows its user **autonomously** using **Arduino** hardware programmed in **C**.
- Created an **Android** app that relays GPS data from the user's phone to the smart cart via Bluetooth.
- Developed several **algorithms** to calibrate the GPS module at runtime and to determine the optimal path to the user.
- Used **Git** for version control among the team and for resolving programming issues.

ViBE

Ongoing

- An app that determines the chord progression to a piece of music.
- Implemented a basic **pitch detection algorithm** in **Python**.
- Currently training a **TensorFlow** model to improve the accuracy of the algorithm.

Education

University of Waterloo

Candidate for Bachelor of Software Engineering

Waterloo, ON

September, 2019—Ongoing

- Received President's Scholarship of Distinction upon admission for an academic average exceeding 95% in high school.
- Relevant courses: Data Abstraction and Implementation, Digital Circuits and Systems, Linear Algebra.

Markville Secondary School

Ontario Secondary School Diploma

Markham, ON

September, 2015—June, 2019

- Received York Region District School Board General Proficiency Scholarship for the highest academic average upon graduation.
- Additional awards for accomplishments in English, Computer Science, Mathematics, Physics, and Music.

Volunteer Experience

York Region District School Board

Music Teaching Assistant

Markham, ON

September, 2018—April, 2019

- Demonstrated **communication** and **leadership** by guiding an orchestra of 30 elementary school students through weekly rehearsals in preparation for a music festival.