Kevin Lin

University of British Columbia · Engineering Physics · Year 3

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Skills

- Coding: Python, Java, C++, JavaScript, C, MATLAB, ROOT
- Tools: Machine Learning, FPGA, Git, AWS, Android Studio, ROS, OpenCV
- Fluent in English, French, and Cantonese
- Strong work ethic and perseverance

Work Experience

SNOLAB
Sudbury, ON, Canada

Student Research Assistant — *Feb. 2020 - May 2020*

- Utilized C++ and ROOT (CERN data language) to analyze a neutrino detector's radon monitor data
- Wrote engineering documentation for an industrial-scale Radon gas reduction system
- Calculated radon emanation rate of underground lab walls and floors using an acrylic chamber
- Wrote a Medium.com article explaining Neutrinoless Double Beta Decay, a complicated physics phenomena

Game of Apps
Richmond, BC, Canada

Software Developer Intern — *Jul. 2019 - Aug. 2019*

- Collaborated with 14 designers and developers on an app that teaches mobile app design to high schoolers
- Used Java in Android Studio, created user profile, learning quizzes, credits, and fixed existing bugs
- Used Git with Bitbucket as a version control tool, and Firebase as a backend
- Oversaw subteam of 3 developers + 1 designer and communicated with team using Slack, Trello, and Miro

Student Design Teams

UBC Snowbots (Mars Rover Team)
Vancouver, BC, Canada

Systems Integration Lead, Software Team — *Oct. 2018 - Present*

- Worked with the 20+ member interdisciplinary design team making an autonomous rover for national competitions
- Used a Ubuntu environment with C++ to interface a gaming controller with rover ROS software
- Used Github to perform code reviews with other software team members
- Troubleshooted routers with OpenWRT firmware to increase signal distance by 1km

UBC Aerodesign
Vancouver, BC, Canada

Avionics and Propulsions Subteam Member — *Sep. 2020 - Present*

- Implemented real-time data visualization of avionics data on ground station website using React/JavaScript
- Implemented temporary fake avionics data generation using plane simulation to replace sensors that were unavailable due to COVID-19
- Tutored teammates on Android Studio practices and implemented fixes for phone app

Technical Experience

Machine Learning Class + Project

Convolutional Neural Nets, Qlearn, Computer Vision — *Sep. 2020 - Jan. 2020*

- Used Python, Keras/TensorFlow convolutional neural net to classify computer generated license plates
- Used OpenCV computer vision to detect and process license plates in a Gazebo simulation world
- Earned a perfect score in a class-wide robot competition by reading every license plate correctly
- Created a convolutional neural net that rates art, trained on 30000+ posts from Reddit's r/art
- Used Qlearning to teach a robot to follow a line path

Autoscroll Sidekick

Java Android App For Viewing Guitar Tabs — *Aug. 2019 - Oct. 2020*

- Created a Java Android app that scrolls Guitar sheet music hands-free
- Entered production and published the app to the Google Play store
- Created tutorial and promotional materials using Figma and Photoshop

Python Software Projects

Twitter, Discord and Reddit bots made in Python — *Oct. 2019 - Oct. 2020*

- Created a Reddit bot (u/DethesaurizeThisBot) that can be summoned to simplify complex passages using Natural Language Processing and Reddit API
- Created a Discord voice channel bot that takes song requests to play music and sound effects using Discord.py API
- Created a Twitter bot (@xkcdrandomizer) that tweets randomized variations of xkcd comics using Twitter API, automated with AWS Lambda and Serverless