Kevin Lin

4th Year Engineering Physics, University of British Columbia

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Skills

Programming: (Python, Java, C++, JavaScript) • **DevOps Tools** (Git, GitLab CI, Jenkins, AWS S3, GCP Kubernetes)

Agile Tools (G Suite, Jira, Miro, Slack, Confluence) • **Languages:** (English French Cantonese)

Modern Technologies (Keras, Tensorflow, OpenCV, Selenium, OAuth2, Streamlit, React)

Professional Experience

Software Engineer Intern, Sauce Labs 05/2021 – 12/2021 | Vancouver, Canada

- Created PipeDream, a soon-to-be **open-source** modern, intuitive, web-hosted pipeline-running **GUI tool** for developers that enables easy, secure variable selection, pipeline sharing, and pipeline transparency
- Added major automated testing features (**Selenium 4, Windows 11, and Mac 12**) to Sauce's **Python** codebase, with heavy use of Gitlab CI andKubernetes
- Learned to use complex **CI/CD pipelines** and cloud services for the implementation and support of features
- Gained exposure to many DevOps tools such as **Google Cloud, AWS, Kubernetes, Docker, and Jenkins**
- Used Agile development tools like Jira, Miro, Confluence, and Zoom to communicate with an 8-person team

Student Research Assistant, SNOLAB 02/2020 – 05/2020 | Sudbury, Canada

- Utilized C++ and ROOT (CERN data language) to analyze a neutrino detector's radon monitor data
- Wrote a rigorously reviewed article explaining Neutrinoless Double Beta Decay, a complicated physics phenomena

Software Developer Intern, Game of Apps 07/2019 – 08/2019 | Richmond, Canada

- Collaborated with 14 designers and developers on a Java Android app that teaches mobile app design and programming to high school students
- Created progress quizzes, user profiles, and dark mode, interfacing with a NoSQL database and designs in Figma

Engineering Design Teams

Avionics, UBC AeroDesign 09/2020 – present

- Implemented real-time data visualization of flight data on ground station website using **React**/JavaScript
- Overhauled existing flight data acquisition pipeline in favour of a streamlined Python application
- Used **OpenCV** to rapidly prototype plane-mounted camera's detection of landing circles

Software & Integration, UBC Snowbots (Mars Rover Team) 10/2018 – 09/2021

- Used **Ubuntu 18.04**, **C++** and ROS to write code that interfaced controllers, motors, routers, and cameras, and performed end-to-end integration tests with all these components
- Specced, purchased and tested electronic speed controllers, LiPo batteries, and motors for rover's drivetrain
- Troubleshooted routers with OpenWRT firmware to increase signal distance by 1km

Personal Projects

Software Projects

- Created a **Python computer vision** program that converts YouTube piano tutorials into sheet music
- Created a **Java Android** autoscrolling app to enable the viewing of sheet music on mobile Android devices
- Created a Twitter bot (@xkcdrandomizer) that uses Python to randomize panels of xkcd comics and tweets them using **Twitter API, AWS Lambda and Serverless**

Machine Learning Class Competition

- Used **Python, Keras/TensorFlow** convolutional neural net to read Gazebo-simulated license plates
- Used **OpenCV** computer vision to unwarp license plates to pass to the neural net
- Earned a perfect score in a class-wide robot competition by reading every license plate correctly