Kenneth Xing

kcxing at student ubc ca
kennethxing.com
https://github.com/kxing28

SKILLS

Languages Python, C, C++, Matlab, Java, Bash, VHDL, Ruby
Technologies Git, Linux, Yocto, AWS, Tensorflow, Qt, ROS, React Native, Ruby on Rails, Pandas

WORK EXPERIENCE

Tesla – *Incoming Integration Engineer Intern, Body Controls, Vehicle Firmware*

JAN 2025 – APR 2025

- Will contribute to the development of embedded firmware for vehicle body control systems, focusing on actuator control, power management, and communication protocols (CAN, LIN).

VodaSafe – *Sonar Research Co-op – Python*

MAY 2024 – AUG 2024

- Improved distance-based gain compensation for sonar pulses via least-squares regression with **pandas** and **scipy**, improving sonar signal quality by 20%
- Built a quality-control pipeline for machine learning data, boosting model performance by 15%

Garmin – *Consumer Auto Software Engineer Intern – C++*

MAY 2023 – AUG 2023

- Deployed object-detection machine learning models using **Tensorflow** on **Linux**-based dashcams
- Evaluated on-device neural network performance using a custom-built automated test suite in **Python**
- Developed filtering algorithm to improve prediction accuracy and performance by 30%

Generac – *Embedded Linux Developer Co-op - Python*

MAY 2022 – DEC 2022

- Managed **Yocto**-based Linux distributions on Raspberry Pi for home solar battery systems
- Implemented firmware update mechanism with **AWS IoT Jobs**
- Tracked down code inefficiencies with **strace**, improving SD card longevity by 10x

TECHNICAL PROJECTS

Automated Screw Sorter –*ENPH 479 Capstone Cours*

- Developed in a team of 4 a machine to isolate and classify fasteners with machine vision techniques
- Built front-end GUI with **Qt** hosted on a Raspberry Pi
- Implemented controller-peripheral communication protocol between BluePill STM32 microcontrollers
- Built data labeling and cloud storage pipeline for efficient, extensible training data collection

Flight Avionics and Telemetry – *UBC Rocket*

- Optimized linear algebra functions in **C** to enhance efficiency and safety of trajectory algorithm
- Implemented **CAN** protocol between microcontrollers and sensors
- Implemented **SPI** protocol with flight computer and battery management system

Self-Driving Car Simulation – ENPH 353 *Project Cours*

- Developed an autonomous car with **Python** and **ROS**
- Trained a convolutional neural network with **Tensorflow** and **Keras** to recognize alphanumeric characters on a license plate with 99% reliability
- Applied machine vision techniques to detect license plates, pedestrians, and vehicles from camera feed

EDUCATION

University of British Columbia, Vancouver — *Bachelor of Applied Science Engineering Physics*

SEPTEMBER 2019 - MAY 2025

- 3.9/4.0 GPA, Dean's Honour List
- TA in Physics and Computer Engineering
- Co-director in UBC A Cappella's Unaccompanied Minors