TONY **XU**

tony.xu@alumni.ubc.ca || tonyxu.me || (403) 499-8507
linkedin.com/in/tony-lt-xu || github.com/Tonyxu74

EDUCATION

University of British Columbia

BASc, Electrical-Biomedical Engineering
Minor in Physics
Cumulative GPA: 3.9
Year 3, expected May 2022

AWARDS

October 2019
20th nationwide on IEEEXtreme 13.0 programming competition

July 2019
NSERC Undergraduate Student Research Award

September 2018
Trek Excellence Scholarship for top 5% standing in Faculty of Applied Science

June 2017
Tuum-Est Experiential Award for upcoming undergraduate students

April 2017
15th nationwide on Canadian Association of Physicists Exam

INTERESTS AND ACTIVITIES

Astronomy
UBC Badminton Club
Ultimate intramurals
Bodyweight fitness
Piano
Travelling
Experiencing new cultures

SKILLS

LANGUAGES: Python, C, MATLAB, JavaScript

DEEP LEARNING: PyTorch, CUDA, Keras/TensorFlow, scikit-learn, Pandas

EXPERIENCES

SUMMER RESEARCH STUDENT

Sunnybrook Research Institute – Physical Sciences | May 2019-August 2019

- Used deep learning and computer vision techniques to analyse digitized breast cancer slide images for cancer detection and classification with **PyTorch**
- Innovated cancer detection pipeline, achieved **91% accuracy** on slide-level segmentation
- Preprocessed using "tissue classifier" network to distinguish important cellular regions, improving accuracy of **overall pipeline by 5%**
- **3rd place** on 470-participant breast histology competition: BreastPathQ

MACHINE LEARNING TECHNICAL LEAD and ELECTRICAL DESIGNER

UBC Biomedical Engineering Student Team (BEST) | October 2018-present

- Lead of the Multifaceted Innovations in NeuroTechnology (MINT) project ML sub-team
- **3rd place** in NeurotechX student competition for creating and designing home-made EEG
- Working to create a user-centric EEG controlled home automation application

TEACHING ASSISTANT

UBC Department of Mathematics | September 2019-present

- Grading and tutoring differential calculus course with **high TA involvement**, focused on developing logical and grammatical coherence on top of mathematical competence

TECHNICAL PROJECTS

SmartStop | November 2019

- Submission for Decode Congestion hackathon using Raspberry Pi with camera module to control a blinking stop sign, improves intuitiveness and safety of 3 or 4-way stops
- Created segmentation model in **PyTorch** to detect vehicles and pedestrians in real-time using Berkeley DeepDrive dataset, coded stop sign controller using **Python**

Doggin' Dog GAN | July 2019-August 2019

- Created a network making fake dogs using Stanford Dogs dataset with an encoding model to apply eccentric GAN-like features to a real dog image; "gannifying"
- Worked on **Python** backend, DCGAN model created with **PyTorch**
- Designed frontend with **React**, contained everything in Docker, deployed online with AWS