Shu Nakamura

s2nakamu@edu.uwaterloo.ca

SKILLS

- C, C++, Python, R, HTML, CSS/SCSS, JavaScript
- Scipy, Pytorch, Chainer, Pandas, Matplotlib, TensorFlow, Keras, MongoDB and OpenCV
- Expertise with development on Linux, Git
- High understanding of electronics, computer vision, sound processing, computer networking

EXPERIENCE

- RIST, Dec. 2017 - Aug. 2018
  Machine Learning Research Intern
  - Created anomaly detector in printings, and decreased error rate by 70%
  - Created Sleep Apnea Syndrome detector using patients' X-ray photograph and increased precision by 30%
- WATonomous, Self Driving Car Team, Nov 2018 - Present
  Sign Detection Team Core Member
  - Working to embed a object-detection neural net to FPGA, to speed up the processing
- KIMIA Lab Undergraduate Research Assistant, Dec 2018 - Present
  - Rewrite Radon transform program from MATLAB to C++ for acceleration

RELEVANT ACTIVITIES

- Japanese Olympiad in Informatics 2016 Finalist when in High School, placed in the top 80th out of 1000 participants in a nation-wide competitive program competition
- Created CNN-based musical onset detector using Japanese rhythm game "Taiko: Drum Master" (A report and the source code is available) by using Fourier Transforms to generate a mel-scale spectrogram to perform image analysis
- Carried out a research on evaluation of several solutions of Rubik's Cube when in High School, with Monte Carlo method program written in C++

EDUCATION

- University of Waterloo, Sep. 2018 - Present
  Bachelor of Mathematics, Computer Science
- Kyoto University, Apr. 2017 - Present
  Bachelor of Engineering, Electrical and Computer Engineering