

SKILLS

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

EXPERIENCE

- KIMIA Lab, Dec 2018 - Present
Computer Vision Research Assistant
 - Rewriting Radon transform program from MATLAB to C++ for inference acceleration
- WATonomous, Self Driving Car Team, Nov 2018 - Present
Perception Engineer - Sign Detection
 - Embedding an object-detection DNN to the Intel Arria 10 FPGA to significantly improve inference speed
- RIST, Dec. 2017 - Aug. 2018
Machine Learning Research Intern
 - Created anomaly detector in printed matters, and decreased error detection rate by 70%
 - Created Sleep Apnea Syndrome detector using patients' X-ray photographs and increased precision by 30%

RELEVANT ACTIVITIES/PROJECTS

- 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++
- Working to code C compiler from scratch. It can now compile basic arithmetics, calling of external functions with arguments, and branching. Repository: <https://github.com/woodyZootopia/woodycc>

EDUCATION

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