LANG SU

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SKILLS

Languages: C, C++, C#, Java, R, Bash
Machine Learning: Python, Keras, Tensorflow, PyTorch, Sci-ki Learn
Backend: Nodejs, Express, Flask, MySQL, PostgreSQL
Frontend: HTML, CSS, Javascript, jQuery, React Native, d3, phaser

PROFESSIONAL EXPERIENCE

Waterloo Cognitive Autonomous Driving Lab

Undergraduate Research Assistant — **Janurary 2019 – Present**

Focusing on research on safe Imitation Learning for Autonomous Driving.
Analyzed and preprocessed ground truth data from simulated urban environment driving scenes.
Fine-tuned a VGG16 neural network to predict affordance data given sensor images.

TRU Simulation, Inc.

Software System Specialist Intern — **May 2018 – August 2018**

Responsible for improving user-facing software and internal services.
Refined display mechanism (C++/Cli .Net) that boosted client-side performance and efficiency
Implemented command line support for starred project that delivers fast data processing
Developed Python Flask server that supports company-wide concurrent library build to prevent previously-frequent version number error.
Corrected navigation system data parsing that enhanced program robustness and future support.

TRU Simulation, Inc.

Software Engineer Intern — **May 2017 – August 2017**

Implemented a search engine from scratch, including Nodejs server development with Rest API support, MySQL database design with caching, a multi-functional frontend UI and PowerBI data analysis tool integration.
Consistently improved project quality and user experience through communications with users.

PROJECT

Traffic Sign Recognition

Deep Learning, Object Classificiation — **July 2018 – August 2018**

Applied Transfer Learning on a ResNet50 Convolutional Neural Network that achieved 99.2% accuracy on the 62-class Belgium Traffic Sign Dataset.

Piano Harmony Generator

Deep Learning, Music Generation — **November 2018 – December 2018**

Implemented a Recurrent Neural Network encoder-decoder model that generates piano accompaniments based on main melodies.

Joynd Application

Frontend and Mobile Development — **August 2018 – present**

Provide development and technical support for a growing startup.
Working on a wide range of tasks, including frontend development using React Native, PostgreSQL database design and maintainance, AWS EC2 server employment and Phaser HTML5 game design

Wholesale Customer Data Analysis

Unsupervised Learning, Data Clustering — **May 2018 – June 2018**

Applied data preprosessing methods including feature scaling and PCA.
Trained an unsupervised learning model clustering customers according to shoppers spending pattern.

EDUCATION / CERTIFICATION

University of Waterloo, Ontario, Canada

B.S of Computer Science, Human Computer Interaction — **September 2015 – Present**

Udacity, Online

Machine Learning Engineer Nanodegree — **March 2018 – September 2018**