Lang Su

LinkedIn | Portfolio | Github
sulang628@gmail.com | +1(905)923-8105

EDUCATION

UNIVERSITY OF WATERLOO
BCS in Computer Science
Sep 2015 - Present | Waterloo, ON

CERTIFICATIONS

UDACITY
Self-driving Car Nanodegree
Jan 2019 - Present
Machine Learning Nanodegree
Mar 2018 - Sep 2018

PROJECTS

ADVANCED LANE DETECTION
Feb 2019 - Mar 2019 | Computer Vision
Created a robust image processing pipeline using OpenCV for identifying highway lanes in an image or video

TRAFFIC SIGN RECOGNITION
Jul 2018 - Aug 2018 | Deep Learning
Achieved 99.2% accuracy on the 62-class Belgium Traffic Sign Dataset.

DEEP HARMONY
Oct 2018 - Dec 2018 | Deep Learning
Implemented a music generator using RNN encoder-decoder model that composes harmonies based on melodies.

CUSTOMER CLUSTERING
Jun 2018 | Machine Learning
Trained an unsupervised learning model that clusters customers according to shoppers spending pattern.

SKILLS

PROGRAMMING
Language:
C • C++ • Python • Java • JavaScript
C# • Matlab • R • Bash • LaTex
Machine Learning:
Tensorflow • Keras • PyTorch
Sci-ki Learn • OpenCV
Backend
Node.js • Express.js • Flask • MySQL
PostgreSQL • AWS • Git
Frontend
HTML • CSS • jQuery • React
React Native • d3.js • phaser.js

PUBLICATION

C. Sun, L. Su, S. Gu, J. M. U. Vianney and D. Cao. Comparison of CNN based Methods for Affordance Learning in Autonomous Vehicles. Proceedings of the 2019 IEEE International Conference on Intelligent Transportation Systems(ITSC). IEEE, 2019. [Submitted]

RESEARCH

COGNITIVE AUTONOMOUS DRIVING LAB | Research Assistant
Jan 2019 – Present | Waterloo, ON

- Research based on autonomous vehicle perception with focus in affordance learning approach using convolutional neural network.
- Designed algorithms that create affordance labels from ground truth.
- Constructed and trained neural network models on large-scale dataset using Tensorflow, Keras and Python.
- Constantly improved model accuracy by tuning parameters and applying adaptive learning technique.
- Conducted and reported performance comparison among multiple CNNs.

EXPERIENCE

WATONOMOUS | Incoming Perception Team Lead
May 2019 - Present | Waterloo

UDACITY | Student Mentor
Mar 2019 - Present | Remote

- Responsible for leading a group of students who enrolled in Machine Learning Nanodegree program toward graduation.

JOYND | Frontend developer
Sep 2018 - March 2019 | Remote

- Working on a wide range of tasks, including frontend development using React Native, AWS management and Phaser HTML5 game design.
- Helped team release beta version app on Play Store and App Store.

TRU SIMULATION | System Software Specialist Intern
May 2018 – Aug 2018 | Montreal, QC

- Reduced client-side response time from 25s to 1s by completely redesigning display mechanism (C++/Cli .Net).
- Enriched starred project usability and user-friendliness by implementing command line support tool.
- Developed Python Flask server that supports company-wide concurrent library build, which successfully prevents previously-frequent version number error.

TRU SIMULATION | Software Engineer Intern
May 2017 – Aug 2017 | Montreal, QC

- Started company-scale search engine project from scratch.
- Consistently worked on Node.js server development with Rest API support, MySQL database design, and a multi-functional JavaScript web UI with embedding data visualization.
- My project was integrated into the main search engine as an important service, which significantly improved co-workers search efficiency.