Tao Chen

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EDUCATION

University of Southern California **Los Angeles, CA**
Master of Computer Science in Intelligence Robotics *May 2019*

Oregon State University **Corvallis, OR**
Bachelor of Computer Science in Computer System *June 2017*

KEY SKILLS

- Programming Languages: C, C++, Python
- Robotics: Ros, Control, Modeling, CAD design, 3D Printing
- Web Development: HTML, CSS, PHP, JS, Node.js, jQuery, AngularJS, AWS, XML
- Artificial Intelligence: Machine Learning, Decision Making, Reinforcement Learning
- Systems/Tools: Linux script, LaTex, Git

WORK EXPERIENCE

Robotic Embedded Systems Laboratory (RESL) **Los Angeles, CA**
Research Assistant *May 2018 - Present*
- Research focuses on applied reinforcement learning techniques on quadrotor controls.

Media Service, Oregon State University **Corvallis, OR**
Student Worker *October 2015 - June 2017*
- Resolved technical issues with professors and maintained classroom technologies campus-wise.

RESEARCH PROJECTS

Sim-to-(Multi)-Real: Transfer of Low-Level Robust Control Policies to Multiple Quadrotors *May 2018 - March 2019*
- Implemented imitation learning pipeline for proof of concept that a neural network was capable of controlling a quadrotor stably.
- Implemented neural network controller in Ros with Gazebo simulator to fly quadrotors.
- Investigated the dynamical implementation of the physics engine in order to improve our customized simulator.
- Implemented software framework to use neural network controllers on Crazyflie 2.0.
- A paper was submitted to IROS 2019 for publication.

Cassie Bipedal Robot *June 2016 – September 2016*
- Customized a communication protocol to transfer telemetry data between the robot Cassie and the controller.
- Redesigned a user interface and modified the software on the controller to received data of the new protocol and show animation of the robot's pose and status.

SCHOOL PROJECTS

Stock Quote Website and Android App @ USC *September 2017*
- Goal: create a dynamic website that displays stock quotes of user-defined stocks, and an Android App that has similar behavior.
- Featured real-time stock price automatic update and user-defined watch list.
- Used Node.js on AWS Beanstalk as a portal for REST APIs, and AngularJS as a JavaScript framework.

Autonomous RC @ OSU *September 2016 - May 2017*
- Goal: build a RC car platform capable of autonomous driving.
- Led the software development in simulation using Ros.
- Investigated in sensor fusion, motion planning, etc.
- Presented in front of the engineering college and industry partner of the school.

Kaggle Competition @ OSU *March 2017*
- Goal: Train a machine learning model to tell if two Quora questions were asking the same problem.
- Experimented with word filtering and multiple categorization methods.
- Beat 70% of the competitors.

AWARDS AND ACHIEVEMENTS

Winner, Capstone project, Oregon State University *2017*

College of Engineering Scholarship, Oregon State University *2016 & 2017*