

Tao Chen

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EDUCATION

University of Southern California

Master of Computer Science in Intelligence Robotics

Los Angeles, CA

August 2017 - May 2019

Oregon State University

Bachelor of Computer Science in Computer Systems

Corvallis, OR

September 2014 - June 2017

WORK & RESEARCH EXPERIENCE

Robotic Embedded Systems Laboratory (RESL)

Research Assistant

Los Angeles, CA

May 2018 - Present

- o Research on applying machine learning techniques to quadrotor control problems and publish papers at academic conferences.
- o Develop simulation environment and training pipelines that reliably convert neural network graphs to efficient embedded software that runs on STM32 micro-controllers.
- o Skills : Python, C++, C, TensorFlow, OpenAI, ROS, Gazebo, Docker, Boost, \LaTeX

Dynamic Robotics Laboratory

Intern

Corvallis, OR

May 2016 - September 2016

- o Participated in the development of the bipedal robot Cassie that became widely used in the research community.
- o Implemented a communication protocol to securely and reliably transfer telemetry data between the robot and the remote control. Customized a user interface on the remote controller to display the robot's status, e.g. robot pose, temperature, battery etc.
- o Skills: C, C++, Python, MAVLINK, Lua, Bash Script

PROJECTS

Stock Quote Website and Android App

September 2017 - December 2017

- o Developed a dynamic web application and an Android App that featured real-time stock quotes in a user-defined watch list.
- o Skills: HTML, CSS, JavaScript, Java, MySQL, JSON, AngularJS, Bootstrap, jQuery, React, Node.js, AWS, REST APIs, Ajax

Autonomous RC

September 2016 - June 2017

- o Led the software development in a team of 3 to build a RC car platform capable of autonomous driving using open source software and cheap hardware. Aimed to reduce the cost of building small self-driving car platforms for hobbyists.
- o Selected to present in front of the engineering school board of trustees and won the best computer science project of the year.
- o Skills: C++, Python, ROS, Stage, AMCL, Teb_local_planner, LIDAR, IMU

Kaggle Competition

March 2017 - May 2017

- o Led a team of 3 in a challenge to develop a machine learning algorithm to tell if two Quora questions had similar semantic intent.
- o Successfully trained a model that reached a test accuracy of 80% and beat 80% of the competitors.
- o Skills: Python, NumPy, TensorFlow, language modeling, recurrent neural network, part-of-speech tagging, word embedding

PUBLICATIONS

Artem Molchanov*, Tao Chen*, Wolfgang Hönig, James A. Preiss, Nora Ayanian and Gaurav S. Sukhatme, "*Sim-to-(Multi)-Real: Transfer of Low-Level Robust Control Policies to Multiple Quadrotors*", International Conference on Intelligent Robots and Systems, 2019.

(* equal contribution)

AWARDS AND ACHIEVEMENTS

Honor Roll, Oregon State University

2015 & 2016 & 2017

Winner, Capstone project, Oregon State University

2017

College of Engineering Scholarship, Oregon State University

2016 & 2017

Spotlight presenter, Southern California Robotics Symposium

2019

Master's Best Research Award, USC

2019

Hobbies

Things I like @ Anywhere

Forever

- o Programming, Robots, LEGOs, Music, Swimming