

# Tao Chen

🌐 taochenosu.github.io

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🔗 TaoChenOSU

☎ 541-829-8140

## EDUCATION

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### University of Southern California

*Master of Computer Science in Intelligent 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

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### Microsoft

*Software Engineer II - Office of the CTO*

**Redmond, WA**

*Feb 2023 - Present*

○ Building an SDK called Semantic Kernel that allows developers supercharge their apps with the latest in Large Language Models.

○ Skills : Python, C#, React, Typescript, Azure

### Microsoft

*Software Engineer II - Mixed Reality*

**Redmond, WA**

*May 2022 - Feb 2023*

○ Built an end-to-end product that allowed 3D artists to efficiently generate large quantities of synthetic image data, and machine learning engineers to train and deploy computer vision models for industrial use cases.

○ Skills : Python, Azure, Qt, C++

### Xpeng Motors/Xsense.ai

*Software Engineer II - Prediction*

**San Diego, CA**

*Oct 2021 - May 2022*

○ Led the design and development of bicycle/motorcycle motion prediction algorithms that handled highly dynamic and safety-critical scenarios.

○ Explored deep learning and data-driven algorithms for motion prediction towards L4 autonomy.

○ Skills : C++, Python, Pytorch, Bash Script, Docker

### Xpeng Motors/Xsense.ai

*Software Engineer - Sensor Fusion*

**San Diego, CA**

*Dec 2019 - Oct 2021*

○ Designed and developed a stationary object detection algorithm that achieved an average detection range of 150 meters, greatly improving the safety of the Highway Navigation Guided Pilot (Highway NGP) system.

○ Developed multi-object tracking algorithms for Highway for production vehicles equipped with radars and cameras.

○ Developed a 3D real-time visualization tool. Completely replaced ROS and Rviz within the company as the primary tool.

○ Skills : C++, Qt, OpenGL, Python, Bash Script, Docker

### Robotic Embedded Systems Laboratory (RESL)

*Research Assistant*

**Los Angeles, CA**

*May 2018 - Dec 2019*

○ Researched on applying machine learning to quadrotor control problems and published papers at academic conferences.

○ Developed simulation environment in ROS and OpenAI gym as well as a pipeline that converted neural network graphs to high-performance embedded software.

○ Skills : Python, C++, C, TensorFlow, ROS, Gazebo, Docker, Boost, L<sup>A</sup>T<sub>E</sub>X

### Dynamic Robotics Laboratory

*Intern*

**Corvallis, OR**

*May 2016 - September 2016*

○ Participated in the development of the bipedal robot Cassie that became widely used in the research community.

○ Implemented communication protocols to reliably transfer telemetry data between the robot and the remote control.

○ Skills: C, C++, Python, MAVLINK, Lua, Bash Script

## PUBLICATIONS

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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

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Honor Roll, Oregon State University

2015 & 2016 & 2017

College of Engineering Scholarship, Oregon State University

2016 & 2017

Spotlight presenter, Southern California Robotics Symposium

2019

Master's Best Research Award, USC

2019