Tao Chen

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EDUCATION

University of Southern California — **Los Angeles, CA**
Master of Computer Science in Intelligence Robotics, GPA: 3.6 — *August 2017 - May 2019*

Oregon State University — **Corvallis, OR**
Bachelor of Computer Science in Computer Systems, GPA: 3.8 — *September 2014 - June 2017*

WORK & RESEARCH EXPERIENCE

Xsense.ai — **San Diego, CA**
Software Engineer — *Dec 2019 - Present*

- Developed and evaluated sensor fusion algorithms and software using radar and camera perception to track surrounding objects for production vehicles.
- Developed a 3D real-time visualization tool. Gained adaption and completely replaced Rviz across the company.
- Skills : C++, Qt, OpenGL, Python, Bash Script, Docker

Robotic Embedded Systems Laboratory (RESL) — **Los Angeles, CA**
Research Assistant — *May 2018 - Dec 2019*

- Researched on applying machine learning techniques to quadrotor control problems and published papers at academic conferences.
- Developed simulation environment and training pipelines that automatically convert neural network graphs to efficient embedded software that could run on STM32 micro-controllers.
- Skills : Python, C++, C, TensorFlow, OpenAI, ROS, Gazebo, Docker, Boost, LaTeX

Dynamic Robotics Laboratory — **Corvallis, OR**
Intern — *May 2016 - September 2016*

- Participated in the development of the bipedal robot Cassie that became widely used in the research community.
- Implemented a communication protocol to 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.
- Skills: C, C++, Python, MAVLINK, Lua, Bash Script

PROJECTS

Autonomous RC — *September 2016 - June 2017*

- 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 (< $2000). Aimed to reduce the cost of building small self-driving car platforms for hobbyists.
- Selected to present in front of the engineering school board of trustees and won the best computer science project of the year.
- Skills: C++, Python, ROS, Stage, AMCL, Teb_local_planner, LIDAR, IMU

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*

- Programming, Robots, LEGOs, Music, Swimming