

# Peter Wang

## Curriculum Vitae

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### Educational Background

2020

**BS Computer Engineering and Computer Science**, *University of Southern California*, Los Angeles, USA

GPA: 3.95/4

2020

**BS Applied and Computational Mathematics**, *University of Southern California*, Los Angeles, USA

GPA: 3.95/4

### Honors & Awards

2023

**Provost's Research Fellowship**

2023

**Engineering Honors Program**

2021

**CURVE Research Fellowship**

2022

**Academic Achievement Award**

2021

2022

**USC Dean's List**

2020

2023

**FRC Innovation in Control Award**

2019

2020

**FRC Regional Winner**

2018

2019

### Professional Experience

2022

**Research Assistant**, *Interactive and Collaborative Autonomous Robotics Lab*, Prof. Stefanos Nikolaidis, USC

- Develop CNN-based methods (subitizing and compactness model) and optimize placement accuracy to improve sampling efficiency in a geometric task and motion planning problem
- Develop simulation software using PyBullet and real-life robotics demo using ROS

2021

2022

**Research Assistant**, *Dynamic Robotics and Control Lab*, Prof. Quan Nguyen, USC

- Worked on the design and control of a light-weight low-cost quadruped robot
- Co-lead the software control sub-team and develop impedance and force control on the robot legs

2022

### Software Engineer Intern, *Honeybee Robotics*, Altadena, CA

- Developed an operator console on YAMCS Studio to communicate with the ground station YAMCS for displaying incoming telemetry data and sending control commands to the space mining drill
- Crafted a simulator for the drill using python that's able to emulate responses after receiving telecommand

## Research Interests

- Long-horizon Task and Motion Planning Problems
- Multi-agent Reinforcement Learning
- Safety Control and Reachability Problem
- Meta-Learning

## Teaching Experience

### Lab Mentor

2023

#### EE354 Intro to Digital Circuits, *USC*, Los Angeles, CA

Deliver lecture-style instructions and provide assistance to a group of 30 students in a weekly lab section

### Course Producer

2023

#### CSCI360 Intro to Artificial Intelligence, *USC*, Los Angeles, CA

Answer Piazza posts and provide informative grading feedback for a 200-student class

2022

#### EE109 Intro to Embedded Systems, *USC*, Los Angeles, CA

Provided hands-on help to a 30-student class during office hours and lab sections

### Tutoring

2019

#### AP Computer Science & AP Physics

- One-on-one teaching to four high school students on various subjects
- Demonstrated significant improvement in class grades and high AP scores

## Volunteer Experience

2020

#### FRC Team 2659 RoboWarriors Software Mentor, *Bishop Alemany High School*, Mission Hills, CA

- 300+ hours dedicated to mentoring high school students robotics team focusing on design, integration, and iteration for electrical, software, and control system equipment for autonomous robot
- Designed a course titled "Robotics: from Theory to Applications", and deliver a lecture for 2 hrs/week to students

## Skills

- >5 years Python, Java, C/C++, JavaScript, HTML, Git
- >2 years PyBullet, ROS, Linux, MATLAB,  $\text{\LaTeX}$