

# Justin Yu

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## Education

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### University of California, Berkeley

Berkeley, CA

B.S. IN ELECTRICAL ENGINEERING AND COMPUTER SCIENCE, GPA: 3.97

Aug. 2018 - May 2022 (expected)

- Coursework 📄: Python, Java & Data Structures, C & Machine Structures, Algorithms, Machine Learning\*, Probability\* (\*=current)

#### SKILLS

**General** Project Management, Git, Docker, Web (Full-Stack) Development, iOS Development, Google Cloud Platform

**Machine Learning** Python (Tensorflow/Keras, Pytorch), Reinforcement Learning, Robotics (ROS), Anaconda

## Experience

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### Robotic AI and Learning Lab (Berkeley AI Research)

Berkeley, CA

UNDERGRADUATE RESEARCHER

Feb. 2019 - Present

- Researching real world robotic learning of in-hand manipulation with deep reinforcement learning under Prof. Sergey Levine.
- Prototyping reward learning and representation learning methods in simulated and hardware environments.

### Los Altos Hacks 📄

Los Altos, CA

TECH DIRECTOR

Sep. 2016 - Apr. 2018

- Led a team of 6 to handle all tech needed for our student-organized hackathon Los Altos Hacks, which included our website, an iOS app that scanned hackers for meals and check-in, and a Capture The Flag coding challenge.

## Extracurricular

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### Computer Science Mentors

Berkeley, CA

CONTENT MENTOR

Jan. 2019 - Present

- Leading content creation, teaching junior mentors, and teaching small sections for Berkeley's EE16B: Designing Information Devices and Systems II. 5/5 average rating from students in Spring 2019 and Fall 2019.

### Blockchain at Berkeley

Berkeley, CA

LEAD INSTRUCTOR AND ORGANIZER, EDUCATION DEPARTMENT

Sep. 2018 - Dec. 2019

- Lead lecturer for the world's first and most popular undergraduate course on blockchain fundamentals, leading content creation, course management, and coordinating with guest speakers. Class size of around 60 students for Fall 2019.

### Botball Robotics

Los Altos, CA

TEAM CAPTAIN AND INSTRUCTOR

Jan. 2013 - Apr. 2018

- Led a team of middle to high schoolers in Botball robotics competition; won 2nd place seeding at the 2016 Global Conference on Educational Robotics, 1st place overall at 2017 regional tournament.
- Organized and lectured for the Bay Area community introductory workshop on C programming and fundamentals of building competition robots; released a set of object-oriented open source libraries. 📄

## Projects 📄

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### Consensus Simulation 📄

FLASK, JAVASCRIPT, SOCKETIO, HTML/CSS

Feb. 2019 - Apr. 2019

- Simulated a decentralized network of nodes in a blockchain using a chatroom message passing backend to analyze the effects of network size, latency, and voting power under Proof-of-Work Nakamoto (longest chain) consensus.

### Pothole Detection 📄

FIREBASE, TENSORFLOW, GOOGLE CLOUD PLATFORM, SWIFT, JAVASCRIPT

LAHacks 2019

- Created an iOS + web app that allows easy crowdsourcing of infrastructure damage (such as potholes), including geolocation heatmaps. Used pretrained deep learning models to automatically detect and report damages.

## Publications

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Henry Zhu, **Justin Yu**, Abhishek Gupta, Dhruv Shah, Kristian Hartikainen, Avi Singh, Vikash Kumar, Sergey Levine. "Ingredients of Real World Robotic Reinforcement Learning". Accepted to *International Conference on Learning Representations (ICLR)*, 2020. 📄

Ryan Huang, Michael Vronsky, Daniel Wang, **Justin Yu**, Joanne Yuan. "A Mathematical Analysis of Food Waste Production and Redistribution". In *Society for Industrial and Applied Mathematics Student Journal*, 2018. 📄