Justin Yu

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Education

University of California, Berkeley *Berkeley, CA*
B.S. in Electrical Engineering and Computer Science, GPA: 4.00 *Aug. 2018 - May 2022 (expected)*
- Coursework: Python, Java & Data Structures, Linear Algebra, Algorithms*, C & Machine Structures*, Real Analysis* (*=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, Anaconda, Data Visualization, ROS

Experience

Robotic AI and Learning Lab (Berkeley AI Research) *Berkeley, CA*
Undergraduate Researcher *Feb. 2019 - Present*
- Researching real world robotic learning of dextrous 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 LOSALTOSHACKS.COM *Sep. 2016 - Apr. 2018*
- Led a team of 6 people to handle all the tech needed for our student-organized hackathon Los Altos Hacks, which included (1) our website, (2) an iOS app that scanned hackers in for meals, check-in, and raffles, and (3) a capture the flag coding challenge.

Extracurricular

Blockchain at Berkeley *Berkeley, CA*
Lead Instructor and Organizer, Education Department *Sep. 2018 - Present*
- 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.

Computer Science Mentors *Berkeley, CA*
Senior 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.

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

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.

Optimizing Neural Network Classification Feature Selection
Tensorflow *Jun. 2016 - Mar. 2017*
- Developed a genetic algorithm exploration method to perform feature selection on oil-spill classification in satellite images, which reduced redundant features and achieved a statistically significant improvement of 93% validation accuracy.

Honors & Awards

2018	**First Place + Technical Computing Award**, MathWorks Math Modeling Challenge	*New York, NY*
	Top team in the nation out of 913 submissions, $23,000 scholarship award. Published *A Mathematical Analysis of Food Waste Production and Redistribution* in the SIAM student journal. Check it out **here.**	