

Jason Y. Zhang

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EDUCATION

Carnegie Mellon University

Robotics Institute, PhD Student.
Advised by: Deva Ramanan

August 2019 - May 2024 (exp)

GPA: 4.0/4.0

University of California, Berkeley

Computer Science, B.A.

August 2015 - December 2018

GPA: 3.99/4.0

PUBLICATIONS

- **Jason Y. Zhang**, Angjoo Kanazawa, Panna Felsen, and Jitendra Malik. Predicting 3D Human Dynamics from Video. In *International Conference on Computer Vision (ICCV)* 2019. [arXiv:1908.04781](https://arxiv.org/abs/1908.04781).
- Angjoo Kanazawa*, **Jason Y. Zhang***, Panna Felsen*, and Jitendra Malik (* equal contribution). Learning 3D Human Dynamics from Video. In *Conference on Computer Vision and Pattern Recognition (CVPR)* 2019. [arXiv:1812.01601](https://arxiv.org/abs/1812.01601).
- **Jason Y. Zhang** and Anca D. Dragan. Learning from Extrapolated Corrections. In *International Conference on Robotics and Automation (ICRA)* 2019. [arXiv:1812.01225](https://arxiv.org/abs/1812.01225).

RESEARCH EXPERIENCE

Malik Group

Undergraduate Researcher

May 2018 - August 2019

Berkeley, CA

- Conducted research advised by Professor Jitendra Malik and Angjoo Kanazawa to recover and predict 3D meshes of humans and motion from monocular RGB video.
- Designed and implemented convolutional neural network architectures in TensorFlow to explicitly capture the temporal signal in video to produce temporally consistent 3D predictions.

InterACT Lab

Undergraduate Researcher

January 2017 - May 2018

Berkeley, CA

- Worked with Professor Anca Dragan to perform Inverse Optimal Control using corrections rather than full demonstrations by recovering *intended* trajectories through online function approximation.
- Built infrastructure for kinesthetic teaching, propagating corrections, and incorporating user-given corrections on a Kinova Jaco using OpenRAVE and ROS stack.
- Designed and carried out an IRB-approved user study with 26 participants.

WORK EXPERIENCE

UC Berkeley Statistics Department

Course Developer

June 2016 - January 2019

Berkeley, CA

- Working with Professor Ani Adhikari to develop new computational probability course, *Statistics 140: Probability for Data Science*, piloted in Spring 2017.
- Developed curriculum and companion Python Library.
- Wrote course materials including problems sets, quizzes, and labs.

LinkedIn

Software Engineer Intern

May 2017 - August 2017

Sunnyvale, CA

- Deployed web application to automate requests for and installation of external library plugins for integration with internal LinkedIn tools using MySQL and Flask backend and jQuery frontend.
- Built data pipeline to monitor post-commit build error rates and product health using Hadoop and Pig.

TEACHING EXPERIENCE

Statistics 140: Probability for Data Science

Head Teaching Assistant

Spring 2018, Fall 2018

Berkeley, CA

Statistics 134: Concepts of Probability

Teaching Assistant

Fall 2017

Berkeley, CA

Statistics 140: Probability for Data Science

Teaching Assistant

Spring 2017

Berkeley, CA

SKILLS

Languages:

Python, Java, R

Libraries:

TensorFlow, NumPy, SciPy, Matplotlib, OpenRAVE

Software:

Git, IntelliJ/PyCharm, VMware, ROS, Vim, \LaTeX

RELEVANT COURSEWORK

Algorithms

Algorithmic Human-Robot Interaction

Artificial Intelligence

Computer Vision

Computational Photography

Data Structures

Machine Learning

Operating Systems

Optimization Models

Probability Theory

Real Analysis

AWARDS AND HONORS

- Highest Distinction in General Scholarship Spring 2019
- Outstanding Graduate Student Instructor Award Spring 2019
- Computer Science Department Honors Thesis Fall 2018
- Quantedge Award for Academic Excellence Fall 2017
- Dean's Honors List Fall 2015 – Fall 2016

PROJECTS

- Prob140 Library: A Data Science library geared toward probability theory written for Prob140 in Python. Supports graphical visualization and computational tools for finite, infinite, joint, and continuous probability distributions as well as Markov Chains and other random processes. (github.com/prob140/prob140)
- Robot Motion Retargeting using RGB Video: A framework to retarget human poses from monocular video to a robot manipulator. Predicts a heatmap of human joint locations using VNet (Mehta et al 2017), estimates the inverse kinematics, and executes the forward kinematics on a Kinova Mobile Manipulator. Written using Caffe, Matlab, and ROS.