

Ryan Hoque

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EDUCATION

UC Berkeley — Ph.D., EECS — Robotics and AI (Advised by Ken Goldberg) JULY 2020 - PRESENT

UC Berkeley — M.S., EECS — Robotics and AI (Advised by Ken Goldberg) AUGUST 2019 - MAY 2020

- Cumulative GPA: 4.00 (Graduated *Summa Cum Laude*)
- Graduate Coursework: Advanced Robotics, Deep Reinforcement Learning, Robotic Manipulation and Interaction

UC Berkeley — B.S., EECS (Electrical Engineering and Computer Sciences) AUGUST 2016 - MAY 2019

- Cumulative GPA: 4.00 (Graduated *Summa Cum Laude*)
- Coursework: Machine Learning, Artificial Intelligence, Data Structures, Efficient Algorithms, Operating Systems, Quantum Computing, Computer Architecture, Internet Architecture, Computer Security, Probability

Organizations:

- BAIR (Berkeley AI Research) - *Deep Learning and Robotics Research at AUTOLAB advised by Prof. Ken Goldberg*
- Accel Scholars - *Class of thirty high-potential Berkeley EECS students mentored by venture capital firm Accel*
- IEEE-HKN (EECS Honor Society) - *Top 25% of EECS majors, serves the Berkeley EECS/CS community*

WORK EXPERIENCE

Uber ATG, San Francisco, CA — Self-Driving Software Engineering Intern MAY 2019 - AUGUST 2019

- Simulation Team — worked on pruning the space of scenarios by predicting which ones were most likely to fail
- Built an ML pipeline to automate training and prediction on AWS, using a random forest approach to improve the analytic baseline by increasing accuracy from 57% to 92% and saving 65% in costs (new default in production)

Uber, Palo Alto, CA — Software Engineering Intern MAY 2018 - AUGUST 2018

- Maps Platform: Places Team — deployed backend software for tracking and consolidating 30,000+ place editing tasks/week from various sources into a single list sorted by priority using MySQL and Apache Spark
- Designed internal site with React+Redux to accept edit suggestions for places involved in 1.5 million trips daily

PUBLICATIONS

VisuoSpatial Foresight for Multi-Step, Multi-Task Fabric Manipulation <https://arxiv.org/abs/2003.09044>

Ryan Hoque et al. *Robotics: Science and Systems (RSS)*, 2020.

Deep Imitation Learning of Sequential Fabric Smoothing Policies <https://arxiv.org/abs/1910.04854>

Daniel Seita et al. Under review at *IEEE International Conference on Intelligent Robots and Systems (IROS)* 2020.

Learning to Smooth and Fold Real Fabric Using Dense Object Descriptors Trained on Synthetic Color Images

Aditya Ganapathi et al. Under review at IROS 2020.

RECOGNITION

UC Berkeley's Quantedge Award for Academic Excellence FALL 2018

3rd Place out of 750+ students in the CS 170 (Algorithms) NP-Hard Combinatorial Optimization Contest FALL 2017

Best Web App and Cal Hacks Fellowship winner at Cal Hacks, the World's Largest Collegiate Hackathon NOV 2016 & 2017

Outstanding Academic Achievement in Mathematics - Awarded by high school Math Dept. to top student MAY 2016

2nd Place, HP CodeWars & Lockheed Martin Code Quest Programming Competitions (Advanced) MARCH & APRIL 2015

SKILLS

Languages: Python, Java (Expert); JavaScript, Golang, C, C++, SQL, Shell Scripting, R, MATLAB, HTML/CSS, Perl, PHP

Technologies: AWS, Git, Node.js, Tensorflow, PyTorch, Robot OS, OpenAI Gym, Spark, Linux, Flask, MERN Stack, Redux

Areas: Deep Learning, Reinforcement Learning, Robotics, Backend and Full-Stack Development, Autonomous Vehicles