Rohan Chitnis

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Education

Massachusetts Institute of Technology, Cambridge, MA
GPA: 4.8 / 5.0. Minor: Econometrics.
Doctor of Philosophy in Electrical Engineering and Computer Science, May 2022 (expected).
Master of Science in Electrical Engineering and Computer Science, May 2018.

University of California, Berkeley, Berkeley, CA
Graduated with Highest Honors (GPA in top 3%). GPA: 3.95 / 4.0.
Bachelor of Science in Electrical Engineering and Computer Sciences, May 2016.

Experience

MIT Learning & Intelligent Sys. Lab (Adviser: Leslie Kaelbling) 09/16 - Present
- Conduct research in artificial intelligence for robotics, toward a PhD.
- Focus on integrated learning and planning for solving long-horizon robotic tasks.

Nuro Inc., Planning (Software Engineering Intern) 06/21 - 09/21
- Explored integrated data-driven and rule-based reasoning to improve planning stack.
- Developed a synergistic approach that improves behavior in 20-40% of challenge scenes.

Facebook AI Research, Robotics (Research Intern with Abhinav Gupta) 06/19 - 09/19
- Researched formulations of intrinsic motivation for emergence of synergistic behavior in robotics via deep reinforcement learning.
- Built and tested my algorithms in real-world bimanual manipulation environments.

Google Brain, Robotics (Research Intern with Sergey Levine) 05/17 - 09/17
- Researched methods for speeding up deep reinforcement learning for robotics, by regressing on event outcomes to improve exploration.

Airbnb Inc., Search Ranking (Software Engineering Intern) 06/16 - 08/16
- Worked on incorporating mobile data into machine learning models used by the Search Ranking team. Collected and organized data using tools in Hive, Presto, and Scala.

UC Berkeley Robot Learning Lab (Adviser: Pieter Abbeel) 02/13 - 05/16
- Performed work in hierarchical combined task and motion planning.
- Lead coordinator of lab outreach program, providing tours to visitors of varied ages.

Selected Publications

Planning with Learned Object Importance in Large Problem Instances using Graph Neural Networks. Tom Silver*, **Rohan Chitnis***, Aidan Curtis, Joshua Tenenbaum, Tomás Lozano-Pérez, Leslie Pack Kaelbling. AAAI 2021.

Intrinsic Motivation for Encouraging Synergistic Behavior. **Rohan Chitnis**, Shubham Tulsiani, Saurabh Gupta, Abhinav Gupta. ICLR 2020.

Learning Compact Models for Planning with Exogenous Processes. **Rohan Chitnis**, Tomás Lozano-Pérez. CoRL 2019.

Learning Quickly to Plan Quickly Using Modular Meta-Learning. **Rohan Chitnis**, Leslie Pack Kaelbling, Tomás Lozano-Pérez. ICRA 2019.

Learning What Information to Give in Partially Observed Domains. **Rohan Chitnis**, Leslie Pack Kaelbling, Tomás Lozano-Pérez. CoRL 2018.

Honors / Awards

Facebook Fellowship Finalist (Machine Learning track), 2020. Top 4% of applicants.
NSF GRFP Fellow, 2016. Awarded NDSEG Fellowship (declined).
Hertz Fellowship Finalist, 2016. One of 40 finalists nationwide.
Runner-up for the CRA Outstanding Undergraduate Researcher Award, 2016.
Sole recipient of the EECS Mark D. Weiser Excellence in Computing Scholarship, 2015.
UC Berkeley Outstanding Graduate Student Instructor (OGSI) Award recipient, 2015.
UC Berkeley Regents' and Chancellor's Scholar.

Technical Skills

Languages: Python, C++, Java, Scala, LaTeX.
Software: PyTorch, TensorFlow, Theano, Unix/Linux, Robot Operating System (ROS), OpenCV, Apache Pig, Apache Spark, Hadoop MapReduce.