Ashay Athalye

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Education

Massachusetts Institute of Technology, *Cambridge, MA* 2016 – 2022
S.B. in EECS and Economics (double major), minor in Mechanical Engineering (2021), GPA: 4.7/5.0
M.Eng. Candidate (2022)

Coursework includes (**G** for graduate-level):

- *Math*: Differential Equations (18.03), Linear Algebra (18.06), Probability (6.041), Real Analysis (18.100B), Statistics (18.655) [**G**]
- *EECS*: Circuits & Electronics (6.002), Signal Processing (6.003, 6.011), Computer Systems Engineering (6.033), Algorithms (6.006), Feedback Control Systems (2.004, 16.30)
- *AI/ML/Inference*: Artificial Intelligence (6.034), Machine Learning (6.036, 6.867) [**G**], Reinforcement Learning (6.884, 6.246) [**G**], Algorithms for Inference (6.438) [**G**]
- *Economics*: Microeconomics I-IV (14.121-14.124) [**G**], Econometrics I, II (14.380-14.382) [**G**], Labor Economics I, II (14.661-14.662) [**G**], Market Design (14.19), Behavioral Economics (14.13), Developmental Economics (14.74), Public Economics (14.41)

Work Experience

Waymo, Behavior Prediction Team, Software Engineering Intern Summer 2021
- Designed and implemented behavior prediction machine learning models

Microsoft Research, Economics Group, Research Intern January 2020
Automated Learning and Intelligence for Causation and Economics
- Implemented monte carlo simulation framework for evaluation of inference methods; researched evaluation strategies for causal inference methods at the intersection of machine learning and econometrics

GM Cruise, Controls Simulation Team, Software Engineering Intern Summer 2019
- Designed and implemented road model framework for path follower testing and vehicle dynamics simulation; tuned vehicle dynamics models; implemented FMI-based simulation framework

Raytheon BBN, Space and Airborne Systems, Research Intern Summer 2018
Command and Control of Autonomous Swarm Robots (DARPA OFFSET)
- Designed and implemented swarm algorithms for cooperative multi-agent SLAM; designed mounting system for lidars and cameras onto rovers and drones; project manager for rover engineering objectives

NASA JPL, Computer Vision Group, Software Engineering Intern January 2018
Robotic Task-oriented Grasping of Novel Objects
- Implemented training set generation pipeline for supervised deep learning (Blender, Gazebo, ROS)

Research Experience

Behavioral Economics Lab, MIT, *Economics*, Undergraduate researcher 2020-2021
Discrimination and Revelation of Mental Illness in the Workplace
- Programmed web app to run RCT experiment; designed and ran surveys; conducted econometric and analysis; contributed to experimental design and implementation of RCT

Manipulation and Mechanisms Lab, MIT, *EECS*, Undergraduate researcher 2019 – 2020
Sensor Fusion of Visual and Tactile Sensory Data for Object Localization and Robotic Manipulation
- Designed and implemented filtering techniques for deep object pose estimation for household objects

Distributed Robotics Lab, MIT, *EECS*, Undergraduate researcher 2017 – 2018
Ubiquitous Precision WiFi-based Indoor Localization
- Implemented sensor data streaming system under real-time constraints; prototyped antenna-array nodes

Teaching Experience

TA for MIT 6.036, Introduction to Machine Learning Spring 2021
TA for MIT 6.S087, Mathematical Methods for Multidimensional Statistics January 2021
TA for MIT 6.041/6.431, Probabilistic Systems Analysis Fall 2020, Fall 2021

Leadership and Community Service

Gordon-MIT Engineering Leadership Program, (*gelp.mit.edu*) , Participating Student 2018 – 2019

The Gift of Education, (*giftofeducation.org*) , Founder and Pianist 2011 – 2016

Summer Scholars at Worcester Academy, Volunteer Teacher and Curriculum Developer 2011 – 2015