Samir Wadhwania

77 Massachusetts Ave
31-234D
Cambridge, MA 02139

samirw@mit.edu
www.samirw.com
+1 (210) 548-9821

Education	**Massachusetts Institute of Technology**	Cambridge, MA

B.S. Aerospace Engineering, Aug 2014 - June 2018
M.S. Aerospace Engineering, June 2018 - Present
     Laboratory for Information and Decision Systems (LIDS)
     Research: Robotics, Reinforcement Learning, Multi-agent Systems

Research Experience

MIT, Aerospace Controls Lab, LIDS
Advisor: Jonathan How — Cambridge, MA
- Researching reinforcement learning applications for multiagent coordination and planning, specifically for robotic applications.
- Focusing on how informatation can be shared during learning to improve performance of heterogeneous teams. (Summer 2018-Present)

MIT, Integrated Robotics Group, CSAIL
Advisor: Julie Shah — Cambridge, MA
- Implemented speech recognition process for an AI-based decision-support system in labor and delivery wards.
- Utilized open-source software CMUSphinx to perform speech-to-text recognition of spoken commands.
- Identified keywords and calculated Levenshtein distance between spoken command and possible questions to determine the motivation. (Fall 2015)

MIT, D-LAB
Advisor: Sophia Hsu — Cambridge, MA
- Helped install water transport system resource-constrained rural towns.
- Investigated financial structures for development-focused microloans for a local NGO in western El Salvador.
- Won Tau Beta Pi and Undergraduate Giving Campaign awards to travel and implement work in El Salvador. (Spring 2016, Spring 2017)

Professional Experience

U.S. House of Representatives
Legislative Intern — Washington, DC
- Worked in the office of Rep. Michael Capuano (D-MA) as a member of the MIT-DC Policy Internship Program.
- Attended hearings and meetings to draft memos for staffers related to financial services, technology, and space policy. (Summer 2017)

Jet Propulsion Lab
Systems Engineering Extern — Pasadena, CA
- Served as Team Lead and Systems Engineer for a Saturn Probe design project.
- Investigated the effectiveness of an Integrated Modeling Environment in the spacecraft design process. (January 2017)

The Boeing Company

Controls Engineering Intern   Huntsville, AL
- Created flexible vehicle model incorporating FEA models of rocket nozzle and electro-mechanical actuators.
- Designed thrust vector control system for the Exploration Upper Stage of the Space Launch System (SLS).
- Awarded a Pride@Boeing Award for building an internal design tool to create flexible dynamics models for control systems. (Summer 2016)

Northrop Grumman

Software QA Engineering Intern   San Diego, CA
- Performed software code and test procedure reviews in C^{++} on Triton UAS.
- Built process to automate batch importation and linking of test cases to requirements in the DOORS database system. (Summer 2015)

Publications	**Wadhwania, Samir**, et al. "Policy Distillation and Value Matching in Multiagent Reinforcement Learning." *arXiv preprint arXiv:1903.06592* (2019).
	Gombolay, Matthew, et al. "Robotic assistance in the coordination of patient care." *The International Journal of Robotics Research* 37.10 (2018): 1300-1316.

Teaching Experience	Undergraduate Teaching Assistant, Robotics: Science and Systems	Spring 2018
	Undergraduate Tutor, Aerospace Signals and Systems	Fall 2017

Awards	AeroAstro Undergraduate TA Award, Tau Beta Pi Service Fellowship (x2), UGC Fieldwork Grant First Prize, Pride@Boeing Award, Northrop Grumman Performance Recognition Award

Languages and Skills	English (native), Hindi/Urdu (advanced), Spanish (intermediate)
	Python, MATLAB, Simulink, C^{++}, Arduino, HTML, Javascript

Certifications & Leadership	NOLS Wilderness First Responder, SDI SCUBA Open Water Diver
	Freshman Leadership Program, Graduate School Leadership Institute Fellow

Relevant Courses	6.320 - Feedback System Design (G)	16.32 - Optimal Control and Estimation (G)
	6.832 - Underactuated Robotics (G)	16.405 - Robotics: Science and Systems
	6.881 - Robot Manipulation (G)	16.413 - Autonomy and Decision Making (G)
	16.07 - Aerospace Dynamics	16.83 - Space Systems Engineering
	16.31 - Feedback Control Sys. (G)	18.0851 - Computational Sci. & Eng. (G)

References	Jonathan How	Julie Shah	Sophia Hsu
	MIT Aerospace, LIDS	MIT Aerospace, CSAIL	MIT D-LAB
	jhow@mit.edu	julie_a_shah@csail.mit.edu	slhsu@mit.edu
	+1 (617) 253-3267	+1 (617) 324-4879	+1 (541) 619-7291