Stephanie Milani

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	Education
2019	B.S. in Computer Science, University of Maryland, Baltimore County, Cum Laude.
2019	
	Emperior
	Experience
2019–Present	, e e
	Advisor: David Held. Learning from demonstrations and reinforcement learning for robotics.
2019	· · · · · · · · · · · · · · · · · · ·
	Advisor: Cynthia Matuszek.
	Norm-aware hierarchical reinforcement learning.
2018–2019	
	Advisor: Katia Sycara. Context-aware normative planning, learning, and reasoning for domestic service robots.
2016-2019	Research Assistant, UMBC.
	Advisor: Marie desJardins.
2010	Hierarchical model-based reinforcement learning.
2018	Robotics Institute Summer Scholar, Carnegie Mellon University. Advisor: Katia Sycara. (1 of 35 selected out of appx. 800 applicants.)
	Norm-aware reinforcement learning.
2017	Robotics Institute Summer Scholar, Carnegie Mellon University.
	Advisor: Christoph Mertz. (1 of 35 selected out of appx. 800 applicants.)
0014 0016	Generation of adversarial examples for partially occluded traffic sign detection.
2014–2016	Research Assistant, University of Maryland, School of Medicine. Advisor: Jennifer Wenzel.
	Role of dopamine and the endocannabinoid system in reward and reinforcement.
	Awards
	Research
2019	
2018–2019	Undergraduate Research Award, UMBC (1/55 awarded).
	Awarded for work on hierarchical, norm-aware reinforcement learning.
2018	Best Undergrad Poster Presentation, UMBC CSEE Research Symposium.
	Awarded for work on abstract Markov decision processes.
2017, 2018	Researcher of the Week, UMBC.
2017	Traffic21 Women in Transportation Fellow, Carnegie Mellon University.

Service and Leadership

- 2019 Honors College Community Service Award, UMBC (1/4 awarded).
- 2018–2019 **Newman Civic Fellow**, Newman Civic Foundation (1/268 awarded nationally). Awarded for leadership and dedication to spreading and increasing access to CS.
- 2018–2019 **Rewriting the Code Fellow**, Rewriting the Code.
- 2017–2018 France-Merrick Scholar, UMBC (1/7 awarded).

Awarded for commitment to leadership and service in CS and AI.

Academic

2019 Honors College Certificate, UMBC.

National Academy of Engineering Grand Challenge Scholar, UMBC.

Honors Scholar, UMBC.

Meritus Scholar, UMBC.

Merit-based scholarship awarded to one student per year to cover books.

Presidential Scholar, UMBC.

Merit-based scholarship to cover all of tuition for four years.

Travel

- 2019 RLDM.
- 2019 **ICML**.
- 2019 ICML Diversity and Inclusion (Declined).
- 2018 **Oracle Scholar**, funded to attend OurCS Workshop (1/102 chosen).
- 2018 **Grace Hopper Student Scholar**, funded to attend GHC (1/657 chosen).
- 2018 **CWIT Grace Hopper Award**, funded to attend GHC (26% acceptance) (Declined).
- 2018 Inclusion@RSS Scholar, funded to attend RSS.

Publications

- [1] **Stephanie Milani**, N. Topin, and K. Sycara. Penalty-modified Markov decision processes: Efficient incorporation of norms into sequential decision making problems. In *Multidisciplinary Conference on Reinforcement Learning and Decision Making (RLDM)*, 2019.
- [2] Huao Li, **Stephanie Milani**, Vigneshram Krishnamoorthy, Michael Lewis, and Katia Sycara. Perceptions of domestic robots' normative behavior across cultures. In *Conference on Artificial Intelligence, Ethics, and Society (AIES)*, 2019.
- [3] Shawn Squire, John Winder, Matthew Landen, **Stephanie Milani**, and Marie des Jardins. R-AMDP: Model-based learning for abstract Markov decision process hierarchies. In *Multidisciplinary Conference on Reinforcement Learning and Decision Making (RLDM)*, 2017.
- [4] John Winder, Shawn Squire, Matthew Landen, **Stephanie Milani**, and Marie des Jardins. Towards planning with hierarchies of learned Markov decision processes. In *International Conference on Automated Planning and Scheduling (ICAPS) Integrated Execution of Planning and Acting (IntEx) Workshop*, 2017.
 - * denotes equal contribution.

[1] Stephanie Milani. Penalty-Modified Abstract Markov Decision Processes. Technical Report for Undergraduate Research Award, UMBC, 2019. [2] Stephanie Milani. Creating a Scalable Framework for Model-Free Reinforcement Learning in Norm-Rich Environments. Robotics Institute Summer Scholars Working Papers Journal, 2018. [3] Stephanie Milani and Christoph Mertz. Generating Hard Positve Examples via Adversary for Occluded Traffic Sign Detection. Robotics Institute Summer Scholars Working Papers Journal, 2017. Paper Reviewing 2019 ICML Workshop on AI for Social Good. 2019 ICLR Workshop on AI for Social Good. 2017, 2018 RISS Working Papers Journal. Other Service 2019-Present NeurIPS MineRL Competition on Reinforcement Learning, Organizer. 2018 CCC Al Roadmap Workshop: Integrated Intelligence, Participant. 2017, 2018 **RISS Working Papers Journal**, Assistant Managing Editor. 2017 UMBC Department of IT, Machine Learning Consultant. 2017 ICAPS at Carnegie Mellon University, Volunteer. 2016 Maryland Computing Education Summit at UMBC, Volunteer. Curriculum Development 2017–2018 **Creative Coders**, Curriculum Development Coordinator. Developed curriculum for middle-school students to learn CS concepts. 2016–2017 Computer Science Matters in Maryland, Curriculum Developer. Tutoring 2017 QuHacks Hackathon at UMBC. 2016, 2017 Hour of Code at UMBC. Introduced UMBC and middle-school students to CS and AI via hands-on activities.

- 2019 UMBC Computer Science Education, Treasurer.
- 2017–2018 UMBC Computer Science Education, President.
 - 2017 **Creative Coders**, Co-founder.

Co-founded program to introduce middle-school students to CS.

2017 QuHacks Hackathon at UMBC, Organizer.

Organized day-long hackathon for appx. 100 high-school and middle-school students.

2017	North County High School Computer Science Classes, Co-presenter.
2016-2017	UMBC Computer Science Education, Vice President.
2016, 2017	Hour of Code at UMBC, Organizer.
	Organized two-day-long Hour of Code events.
	Affiliations
	Powriting the Code Alumni

2019–Present Rewriting the Code, Alumni.

2019–Present Association for the Advancement of Artificial Intelligence (AAAI), Member.

2018-Present Association for Computing Machinery (ACM), Member.