Stephanie Milani

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 stephmilani

Education
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2019	**B.S. in Computer Science**, *University of Maryland, Baltimore County*, *Cum Laude*.
2019	**B.A. in Psychology**, *University of Maryland, Baltimore County*, *Cum Laude*.

Experience
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2019–Present   **Research Intern**, *Carnegie Mellon University*.
Advisor: David Held.
Learning from demonstrations and reinforcement learning for robotics.

2019   **Research Assistant**, *UMBC*.
Advisor: Cynthia Matuszek.
Norm-aware hierarchical reinforcement learning.

2018–2019   **Research Intern**, *Carnegie Mellon University*.
Advisor: Katia Sycara.
Context-aware normative planning, learning, and reasoning for domestic service robots.

2016–2019   **Research Assistant**, *UMBC*.
Advisor: Marie desJardins.
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.)*
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
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Research

2019	**NSF Research Experience for Undergraduates**, Carnegie Mellon University.
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 desJardins. 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 desJardins. 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.*

Technical Reports . . . .

[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.

Professional Service . . . .

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 AI 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.

Teaching . . . .

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.

Outreach . . . .

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 . . . .

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.