Max Olan Smith

Ph.D. Candidate, Computer Science and Engineering
University of Michigan, Ann Arbor

max.olan.smith@gmail.com
maxosmith.com
2260 Hayward Street
Ann Arbor, MI 48109 USA

Research Interests

Reinforcement Learning, Multiagent Learning, Empirical Game Theory, Meta-Learning, Deep Learning, and Education.

Education

University of Michigan, Ann Arbor, MI (2017–present)
Ph.D. Candidate in Computer Science (degree expected 2021)
Advisor: Michael P. Wellman
Committee: Satinder Singh, Honglak Lee, Grant Schoenebeck

University of Michigan, Ann Arbor, MI (2014–2016)
B.S.Eng. in Computer Science
Summa Cum Laude

Awards and Honors

2021	Finalist representing the AI Lab, CSE Graduate Honors Competition
2018	Honorable Mention, NSF Graduate Research Fellowship
2016	EECS Outstanding Research Award, University of Michigan
2015	3rd Place, Information and Technology Services: Mobile App Challenge, University of Michigan
2014	1st Place, Microsoft Developer's Challenge
2014	IBM Sponsor Prize, MHacks IV

Professional Experience

Academic

2017 May – 2017 Aug — **Research Intern**, Montréal Institute for Learning Algorithms (Montréal, Québec, Canada)
Host: Aaron Courville
Built new Diplomacy multi-agent dataset and environment, and performed preliminary studies on it resulting in a NeurIPS publication.

Industrial

2022 May – 2022 Aug — **Research Scientist Intern**, DeepMind (Paris, France)
Host: Daniel Hennes

2016 May – 2016 Aug — **Software Engineering Intern**, Google (Mountain View, CA, USA)
Host: Edward Lu
Expanded the travel team's conversion model to utilize additional advanced features resulting in higher model performance. Implemented RPC for serving conversion simulation data to partners.

2015 May – 2015 Aug — **ORISE DHS HS-STEM Intern**, Sandia National Laboratories (Livermore, CA, USA)
Host: Nerayo Teclemariam
Created census data model with support for geo-fence queries of demographic information. Designed and implemented a learning to rank solution for searching through system models.

Teaching Experience

University of Michigan

2017 Fall	**Graduate Student Instructor**, EECS 498/598: Reinforcement Learning†
2016 Fall	**Undergraduate Teaching Assistant**, EECS 280: Programming and Data Structures
2016 Winter	**Undergraduate Teaching Assistant**, EECS 398: Computing for Computer Scientists†
2016 Winter	**Undergraduate Teaching Assistant**, EECS 280: Programming and Data Structures
2015 Fall	**Undergraduate Teaching Assistant**, EECS 280: Programming and Data Structures

Workshop

2018	**Instructor**, Big Data Summer Institute
2018	**Instructor**, Sports Analytics Summer Camp, Exercise & Sports Science Initiative

† *Denotes the first offering of a course.*

Professional Service

2022	Reviewer, International Conference on Learning Representations (ICLR)
2021-2022	Reviewer, International Conference on Machine Learning (ICML)
2020–2022	Reviewer, Conference on Neural Information Processing Systems (NeurIPS)
2018-2021	Reviewer, NeurIPS Deep Reinforcement Learning Workshop
2017	Poster Chair, Michigan AI Symposium: AI for Society

Continued Education

2021	Preparing Future Faculty Seminar, University of Michigan

Manuscripts

[M1] Strategic Knowledge Transfer
Max Olan Smith, Thomas Anthony, and Michael P. Wellman
In Submission. 2022.

[M2] Modeling Deep Reinforcement Learning Agents in Financial Markets
Megan Shearer*, Elijah Soba*, **Max Olan Smith***, and Michael P. Wellman
In Submission. 2022.

[M3] Learning to Play Against Any Mixture of Opponents
Max Olan Smith, Thomas Anthony, and Michael P. Wellman
In Submission. 2021.

Journal Publications

[J1] Long Term Effects of Pair Programming
Max Olan Smith, Andrew Giugliano, and Andrew DeOrio
IEEE Transactions on Education 61.3 (2017), pp. 187–194.

Conference Publications

[C1] Iterative Empirical Game Solving via Single Policy Best Response
Max Olan Smith, Thomas Anthony, and Michael P. Wellman
9th International Conference on Learning Representations. ICLR '21. 2021.
Acceptance: 687 / 2594 (26%).
Spotlight Presentation (3.9%).

[C2] No Press Diplomacy: Modeling Multi-Agent Gameplay
Philip Paquette, Yuchen Lu, Stephen Bocco, **Max Olan Smith**, Satya Ortiz-Gagne, Jonthan K. Kummerfeld, Satinder Singh, Joelle Pineau, and Aaron Courville
33rd Conference on Neural Information Processing Systems. NeurIPS '19. 2019.
Acceptance: 1428 / 6743 (21%).

[C3] Speaker Naming in Movies
Mahmoud Azab, Mingzhe Wang, **Max Olan Smith**, Noriyuki Kojima, Jia Deng, and Rada Mihalcea
16th Annual Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies. NAACL-HLT '18. 2018.
Acceptance: 207 / 647 (32%).

[C4] A Unified Framework for Automatic Wound Segmentation and Analysis with Deep Convolutional Neural Networks
Changhan Wang, Xinchen Yan, **Max Olan Smith**, Kanika Kochkar, Marci Rubin, Stephen M. Warren, James Wrobel, and Honglak Lee
37th Annual International Conference of the IEEE Engineering in Medicine and Biology Society. EMBC '15. 2015.

Other Articles (Blogs, Magazines, Newspapers, Etc.)

[O1] Learning in Multi-Agent Systems: Challenges and Considerations
Max Olan Smith
Dec. 2020. URL: https://ai.engin.umich.edu/2020/12/05/learning-in-multi-agent-systems/.