

MAX OLAN SMITH

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RESEARCH INTERESTS

Reinforcement Learning, Multi-agent Learning, Continual Learning, 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** Spotlight Presentation, 9th International Conference on Learning Representations
- 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
Host: Aaron Courville
Built new Diplomacy multi-agent dataset and environment, and performed preliminary studies on it resulting in a NeurIPS publication. Additionally, set-up video generation pipeline, studying degeneracies in current neural network methods.

INDUSTRIAL

- 2016 May – 2016 Aug** **Software Engineering Intern**, Google
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 Summer Intern**, Sandia National Laboratories
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 Winter** **Undergraduate Teaching Assistant**, EECS 398: Computing for Computer Scientists[†]
- 2016 Fall** **Undergraduate Teaching Assistant**, EECS 280: Programming and Data Structures
- 2016 Winter**
- 2015 Fall**

[†] Denotes the first offering of a course.

WORKSHOP

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

PROFESSIONAL SERVICE

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

ADVISING AND MENTORING

- 2020 – 2021** Yimin Zhu (Undergraduate): Effects of Latency on Deep RL Trading Strategies
- 2020 –** Reena Dhankani (Undergraduate): Deep RL Trading Strategies
- 2020 –** Reagan Miller (Undergraduate): Deep RL Trading Strategies
- 2020 –** Aditya Koneru (Undergraduate): Deep RL Trading Strategies
- 2020 –** Isaac Fung (Undergraduate): Deep RL Trading Strategies

MANUSCRIPTS

- [M1] [Learning to Play Against Any Mixture of Opponents](#)
Max Olan Smith, Thomas Anthony, Wang Yongzhao, and Michael P. Wellman
In Submission. 2020.

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.
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.
Acceptance: 207 / 647 (32%).
- [C4] [A Unified Framework for Automatic Wound Segmentation and Analysis with Deep Convolutional Neural Networks](#)
Changhan Wang, Xinchun 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/>.