Madelyn Gatchel

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EDUCATION

University of Michigan **Ann Arbor, MI**
Ph.D. in Computer Science & Engineering *September 2021 - Present*

- Advisor: Professor Michael P. Wellman, Strategic Reasoning Group
- Coursework (GPA: 4.0): Advanced Game Theory, Machine Learning, AI Foundations, Advanced AI, Distributed Systems

Davidson College **Davidson, NC**
Bachelor of Science in Computer Science (High Honors) and Mathematics, Magna Cum Laude *May 2021*

- GPA: 3.990; Computer Science Major GPA: 4.000; Mathematics Major GPA: 3.970
- Coursework: Algorithmic Game Theory, Machine Learning, Deep Learning, Analysis of Algorithms, Graph Theory
- Honors Thesis: "Variable-Player Learning for Simulation-Based Games," advised by Professor Bryce Wiedenbeck

RESEARCH EXPERIENCE

Department of Computer Science & Engineering, University of Michigan **Ann Arbor, MI**
Graduate Student Research Assistant – Strategic Reasoning Group *August 2021 - Present*

Department of Mathematics and Computer Science, Davidson College **Davidson, NC**
Undergraduate Research Assistant *May 2020 - August 2021*

Department of Computer Science, Brown University **Providence, RI**
DREU Undergraduate Research Assistant for Prof. R. Iris Bahar *May 2019 - August 2019*

PUBLICATIONS

1. Madelyn Gatchel and Bryce Wiedenbeck. Learning Parameterized Families of Games. In *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS),* May 2023. 1044–1052.
2. Madelyn Gatchel. Analyzing Games with a Variable Number of Players (Extended Abstract). *Proceedings of the AAAI Conference on Artificial Intelligence: Student Papers and Demonstrations*, May 2021. Vol. 35, No. 18, 15960-15961.

SHORT TALKS & POSTERS

1. Madelyn Gatchel. "Learning Parameterized Families of Games." *CRA-WP Grad Cohort for Women*, April 2022. Poster.
2. Madelyn Gatchel. "Variable-Player Learning for Simulation-Based Games." *Davidson College Verna Miller Case Symposium*, April 2021. Short Talk.
3. Madelyn Gatchel. "Multi-SpooNN: A Lightweight Network for Multiple Object Detection." *Brown Summer Undergraduate Research Symposium*, August 2019. *Grace Hopper Celebration*, October 2019. Poster.

DEPARTMENT LEADERSHIP

CSE PhD Admissions Committee, University of Michigan **Ann Arbor, MI**
Student Representative *December 2021 - Present*

- Provide input from student perspective at the weekly CSE PhD admissions committee meetings
- Assist the committee and the Graduate Programs Office in planning the in-person recruitment weekend
- Served as a greeter, driver, current student panel member, dinner host, and current student representative at various sessions during the 2021 and 2022 in-person recruitment visit (20+ hours each year)
- Recruited and helped train ~20 student volunteers to evaluate AI applications (2022 application cycle)
- Conducted thorough evaluations of 10+ AI applications for 2021 application cycle and 15 AI applications for 2022 application cycle

CSE Graduate Student Organization, University of Michigan **Ann Arbor, MI**
Recruitment Chair *August 2022 - May 2023*

- Organized a program which paired current Ph.D. students with 15 Ph.D. applicants from diverse backgrounds to provide feedback on their Statements of Purpose (SoP)
- Recruited, scheduled, and managed nearly 50 current student volunteers for virtual and in-person recruitment visits
- UM CSE Explore Graduate Studies current student panelist
- UM College of Engineering EMERGE program volunteer

AI Lab, University of Michigan **Ann Arbor, MI**
AI Tea Co-Coordinator *December 2021 - May 2023*

- Planned and facilitated monthly AI discussions with co-coordinator for 25+ AI lab graduate students and faculty

Women in Computer Science (WiCS), Davidson College **Davidson, NC**
Vice President *August 2019 - May 2021*

- Assisted with organizing weekly meetings and coordinated event logistics with outside speakers and groups
- Mentored first-year and sophomore women and non-binary students exploring computer science

TEACHING EXPERIENCE

Department of Mathematics and Computer Science, Davidson College **Davidson, NC**
Computer Science Assistant Teacher *August 2019 - May 2021*

- CSC 121 Programming and Problem Solving (Python): Fall 2019, Spring 2020, Fall 2020 (60-90 students per semester)
- CSC/MAT 220 Discrete Structures (introductory proofs course): Spring 2021 (25 students)
- Led 2-3 weekly sessions for 5-25 students to review coursework and class concepts
- Spring 2020: Taught three lectures (string manipulation, return statements, file I/O) in professor's absence
- Fall 2020: Reformatted quiz handouts, skeleton files, solutions, and autograders to align with restructured course

Computer Science Grader *August 2018 - May 2019*

- CSC 121 Programming and Problem Solving (Python): Fall 2018, Spring 2019 (20-40 students per semester)

RELATED EXPERIENCE

Rodgers Builders, Inc. **Charlotte, NC**
IT Intern *May 2018 - August 2018*

- Collaborated with fellow intern to resolve Salesforce implementation gaps such as syncing email replies to case tickets
- Implemented an asset management process for devices and inputted data into Salesforce
- Analyzed IT Help Desk processes on Service Cloud and customized features for improved efficiency and organization
- Assisted the CIO in outlining, creating, and preparing his presentation for the Charlotte CIO Forum
- Trailhead by Salesforce: Ranger rank, the highest achievable rank (100+ badges)

HONORS & AWARDS

- CRA-WP Grad Cohort for Women Scholar (Spring 2022)
- AAAI-21 Undergraduate Consortium Scholar (Spring 2021)
- Davidson College Senior Computer Science Award (Spring 2021)
- Davidson College William Gillespie McGavock Mathematics Award (Spring 2021)
- Honor Societies: Phi Beta Kappa (Fall 2020), Omicron Delta Kappa (Spring 2020)
- Davidson College Bernard Society of Mathematics Sophomore Computer Science Award (Fall 2019)
- CRA-WP Grace Hopper Celebration Research Scholar (Fall 2019)
- Davidson College Chidsey Leadership Fellow (Spring 2018)

PROFESSIONAL SERVICE & VOLUNTEERING

- AAMAS-23 student volunteer (May 2023)
- UM Computing CARES Failing Forward panelist (February 2023)
- Mentor for EECS 110 Discover Computer Science (Winter 2022, Fall 2022)
- Student interviewer for UM College of Engineering Director of Graduate Initiatives position (April 2022)