Madelyn Gatchel

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EDUCATION

University of Michigan   **Ann Arbor, MI**
Ph.D. in Computer Science   *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
- Relevant coursework: Algorithmic Game Theory, Machine Learning, Deep Learning, Analysis of Algorithms, Graph Theory

RESEARCH EXPERIENCE

Strategic Reasoning Group, University of Michigan   **Ann Arbor, MI**
Graduate Student Research Assistant (GSRA)   *August 2021 - Present*
<u>Project</u>: Empirical Mechanism Design for Parameterized Game Families, advised by Professor Michael P. Wellman

Department of Mathematics and Computer Science, Davidson College   **Davidson, NC**
Davidson College Research Assistant   *May 2020 - August 2021*
<u>Project</u>: Learning Parameterized Families of Games, advised by Professor Bryce Wiedenbeck
- Presented poster at CRA-WP's Grad Cohort for Women workshop in April 2022
- Honors Thesis: "Variable-Player Learning for Simulation-Based Games"

School of Engineering, Brown University   **Providence, RI**
DREU Undergraduate Research Assistant   *May 2019 - August 2019*
<u>Project</u>: Multi-SpooNN: A Lightweight Network for Multiple Object Detection, advised by Professor R. Iris Bahar
- Presented poster at Brown's Summer Undergraduate Research Symposium and at Grace Hopper Celebration in October 2019

PUBLICATIONS

Madelyn Gatchel and Bryce Wiedenbeck. Learning Parameterized Families of Games. *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS).* May 2023.

Madelyn Gatchel. Analyzing Games with a Variable Number of Players (Extended Abstract). *Proceedings of the AAAI Conference on Artificial Intelligence: Student Papers and Demonstrations.* 35, 18 (May 2021), 15960-15961.

LEADERSHIP & SERVICE

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, DEI panel member, dinner host, and current student representative at various sessions during the 2021 in-person recruitment visit (~20 hours)
- Conducted thorough evaluations of 10+ AI applications for 2021 application cycle and 15 AI applications for 2022 application cycle

Computer Science & Engineering Graduate (CSEG) Student Organization   **Ann Arbor, MI**
Recruitment Chair   *August 2021 - Present*
- 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)
- 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 - Present*
- Plan and facilitate monthly AI discussions with co-coordinator for 20+ AI lab graduate students and faculty

Women in Computer Science (WiCS)   **Davidson, NC**
Vice President   *August 2019 - May 2021*
- Assisted with organizing and leading weekly meetings and coordinated event logistics with outside speakers and groups
- Encouraged, supported, and mentored first-year and sophomore women and non-binary students to explore computer science

RELATED 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
- CSC/MAT 220 Discrete Structures (introductory proofs course): Spring 2021
- Led 2-3 weekly sessions for 5-25 students to review coursework and class concepts, assisting 60-90 total students each semester
- Created personalized practice problems for students struggling with a particular concept or skill to resolve points of confusion
- Spring 2020: Taught three lectures (string manipulation, return statements, file I/O) independently in professor's absence
- Fall 2020: Reformatted quiz handouts, skeleton files, solutions, and Gradescope autograders to align with restructured course

Computer Science Grader | *August 2018 - May 2019*

- CSC 121 Programming and Problem Solving (Python): Fall 2018, Spring 2019
- Analyzed and evaluated coding assignments for 20-40 students per semester
- Identified areas of improvement and suggested concrete means to address the areas
- Communicated detailed results and observations from assignments with professor

Rodgers Builders, Inc. | **Charlotte, NC**
Innovative Specialist (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; generated reports in Salesforce
- Analyzed current 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

- 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 GHC Research Scholar (Fall 2019)
- Davidson College Chidsey Leadership Fellow (Spring 2018)