RACHEL MOAN

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OVERVIEW

PhD in Computer Science, University of Illinois at Urbana-Champaign — August 2022 - Present
GPA: 4.0

B.S. in Computer Sicence, B.S. in Mathematics, Winthrop University — August 2018 - May 2022
Magna Cum Laude, GPA: 3.8/4.0
Relevant Coursework: Machine Learning, Algorithms, Computer Science Theory, Linear Algebra, Partial Differential Equations, Number Theory, Probability and Statistics, Calculus I, II, and III
President's List (Spring '20, Fall '20, Spring '21, Fall '21, Spring '22) Dean's List (Fall '18, Fall '19)

NSF GRFP Fellow — April 2023

RESEARCH EXPERIENCE

Robotics Institute for Summer Scholars — May 2021 - August 2021
Carnegie Mellon University — *Pittsburgh, PA*

- Researched reconnaissance UAVs for search and rescue missions.
- Published in the RISS journal and presented our work both in video form and at a poster session.
- Assisted in compiling the RISS journal and helped with outreach initiatives.

Undergraduate Research in Robotics — May 2020 - October 2020
University of South Carolina — *Columbia, SC*

- Researched robot illusions and simulations of reality.
- Published and presented research at ICRA 2021. Paper may be found here.
- Served as co-chair at ICRA 2021 virtually.

REU in Applied Computational Robotics — May 2019 - September 2019
University of South Carolina — *Columbia, SC*

- Designed and implemented a localization algorithm for a simple robot contained in a curved environment.
- Designed, implemented, and tested code for localization algorithm.
- Published and presented work at ICRA 2020 virtually. Presentation may be found here. Paper may be found here.

PUBLICATIONS

- Rachel A. Moan, Dylan A. Shell, Jason M. O'Kane. "Multiplexing Robot Experiments: Theoretical Underpinnings, Conditions for Existence, and Demonstrations." In Proc. *Proc. IEEE International Conference on Robotics and Automation*, 2021.
- Rachel A. Moan, Victor Montano, Aaron Becker, Jason M. O'Kane, "Aggregation and localization of simple robots in curved environments," In *Proc. IEEE International Conference on Robotics and Automation*, 2020.

TECHNICAL SKILLS

Python, C++, Java, LaTeX, Unix, Mongo, Tensorflow, CSS, SQL

PROJECTS

Computer Science Honors Thesis — August 2021–May 2022
Winthrop University — *Rock Hill, SC*

- Researched the effect of multi-objective task performance on heterogenous and homogenous learning.

WORK EXPERIENCE

Computer Science Tutor/ Lab Assistant August 2020 - May 2022
Winthrop University *Rock Hill, SC*

- Tutor students in Python and other general Computer Science concepts.
- Assist students in labs four times a week.

Math Tutor January 2019 – April 2021
Winthrop University *Rock Hill, SC*

- Tutored students in Discrete Math, Applied Calculus, Calculus I, and Calculus II.

Peer Mentor August 2020 – May 2022
Winthrop University *Rock Hill, SC*

- Mentor and support first year students.
- Co-teach the introductory university class for freshmen.

EXTRA-CURRICULAR ACTIVITIES

- Math Club (Treasurer: Aug 2019- May 2020 President: Aug 2020-May 2022)
- Math Honors Society (March 2020 - Present)
- Computer Science Honors Society (Spring 2021 - Present)