








Angel Sylvester

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Education

- 2020 –  **Ph.D., University of Minnesota**, Artificial Intelligence and Robotics.
- 2016 – 2020  **B.A., Macalester College**, Chemistry and Computer Science

Employment History


- 2020 –  **Graduate Researcher**, University of Minnesota.
- 2024  **Graduate Engineering (AI/ML) Intern**, Honeywell.
- 2021 – 2022  **Data Analyst Fellow**, SEISMIC.
- 2021 –  **Graduate TA for CSCI 1133, 1103, 1933, and 2980**, University of Minnesota
- 2022  **CSCI 1133 Graduate Instructor**, University of Minnesota.

Awards and Achievements

- 2020-2021  **ADC Fellowship**, University of Minnesota
- 2019  **Datafest "Best in Show"**, Macalester College.
-  **Clare Boothe Luce Scholar**, Macalester College.
- 2016-2020  **DeWitt Wallace Distinguished Scholarship**, Macalester College.

Research Publications

Publications

- 1 J. Harwell, A. Sylvester, and M. Gini, "An empirical characterization of ODE models of swarm behaviors in common foraging scenarios," *Autonomous Robots*, Jul. 2023.  DOI: 10.1007/s10514-023-10121-9.

Workshop/Working Papers

- 1 S. Barman, A. Sylvester, E. Temesgen, and M. Gini., "Multi-agent pathfinding using time-extended graphs using auctions," ARMS Workshop at AAMAS, Auckland, NZ, 2024.
- 2 A. Sylvester and M. Gini., "Facilitating real-time collaboration and learning in search environments for multi-robot systems via real-time evolutionary algorithm," ARMS Workshop at AAMAS, London, England, 2023.
- 3 A. Sylvester, E. Temesgen, N. Etori, and M. Gini., "Autonomy and dignity for elderly using socially assistive technologies," Workshop Assistive Robotics for Citizens at IROS 2023, Detroit, MI, 2023.
- 4 A. Sylvester, E. Temesgen, N. Etori, and M. Gini., "Ethical robot design considerations for people suffering from neurodegenerative disease," Workshop Geriatrics: AI and Robotics for Health & Well-Being in Older Age at IROS 2023, Detroit, MI, 2023.

- 5 J. Harwell, A. Sylvester, and M. Gini., "A robust model for predicting collective behavior in large robot swarms," Robot Swarms in the Real World Workshop at ICRA, 2021.

Presentations



- 1 A. Sylvester and M. Gini., "A dynamic biology driven evolutionary solution to emergent precursors to optimal behavior," poster at CRA-WP Grad Cohort Workshop, 2023.
- 2 A. Sylvester and M. Gini., "Enforcing real-time collaboration and learning in search environments for multi-robot systems," poster at MSI Research Computing Exhibition, 2023.
- 3 A. Sylvester, E. Temesgen, N. Etori, L. Lowmanstone, S. Boehler, and M. Gini., "Developing a patient-centered solution by addressing technology accessibility," video at ICRA Ethics Challenge, 2023.
- 4 A. Sylvester, "Exploring the role of classroom composition on student performance," SEISMIC Minnesota Week Exhibition, 2022.

Skills

Languages	English (fluent), Spanish (intermediate), Korean (basic).
Coding	Java, Python, R, SQL, XML/XSL, \LaTeX , HTML, CSS, JavaScript, Typescript
Databases	Firebase, SQL
Machine Learning	tensorflow, pytorch, keras, scikit-learn
High-Performance Computing (HPC)	SLURM, conda, Docker
Frameworks	Ionic, Netlogo, ARGoS, Webots, Babylon.js, ROS

Miscellaneous Experience

Teaching/Mentoring Experience

- 2023  **SciMent Mentor**, University of Minnesota (earned Silver award and 3M Young Inventor Recognition at Minnesota State Science and Engineering Fair). <https://cse.umn.edu/cs/news/phd-student-angel-sylvesters-mentors-high-school-student>
- 2022  **Summer Computing Camp Instructor**, University of Minnesota

References

Available on Request