Angel Sylvester

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https://www.angel-sylvester.com/

Education

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

Employment History

2025 - · · · ·	Advanced AI Scientist Honeywell.
2020 - · · · ·	Graduate Researcher, University of Minnesota.
2024 - 2025 2021 – 2022	 Graduate Engineering (AI/ML) Intern, Honeywell. Data Analyst Fellow, SEISMIC.
2021 – 2024 2022	 Graduate TA for CSCI 1133, 1103, 1933, and 2980, University of Minnesota 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

- A. Sylvester and M. Gini, "Detecting adversarial interference in cooperative tasks through multi-dimensional bayesian trust metric," *Proceedings of the 19th International Conference on Intelligent Autonomous Systems (IAS-19)*, 2025. *O* URL: TBD.
- A. Sylvester, "Bio-inspired dynamic and decentralized online learning in uninformed heterogeneous multi-agent environments," *Proceedings of the Thirty-Third International Joint Conference on Artificial Intelligence Doctoral Consortium*, 2024. & URL: https://doi.org/10.24963/ijcai.2024/971.
- J. Harwell, A. Sylvester, and M. Gini, "An empirical characterization of ODE models of swarm behaviors in common foraging scenarios," *Autonomous Robots*, Jul. 2023. *O* DOI: 10.1007/s10514-023-10121-9.

Workshop/Working Papers

A. Sylvester and M. Gini., "Detecting adversarial interference in cooperative tasks through multi-dimensional bayesian trust metric," AAAI 2025 Workshop Cooperative Multi-Agent Systems Decision-making and Learning, Detroit, MI, 2025.

- 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.
- 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.
- 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, Philadelphia, PA, 2023.
- 5 A. Sylvester, E. Temesgen, N. Etori, and M. Gini., "Ethical robot design considerations for people suffering from neurodegenerative disease," Workshop Geriatronics: AI and Robotics for Health & Well-Being in Older Age at IROS 2023, Detroit, MI, 2023.
- 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

- A. Sylvester, "Bio-inspired dynamic and decentralized online learning in heterogenous multi-agent environments," Midwest Machine Learning Symposium, 2024.
- 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.
- 3 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.
- 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.
- 5 A. Sylvester, "Exploring the role of classroom composition on student performance," SEISMIC Minnesota Week Exhibition, 2022.

Skills

Languages Coding	 English (fluent), Spanish (intermediate), Korean (basic). Java, Python, C, C++, R, sql, хмl/хsl, ШтЕХ, Нтмl, 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/phdstudent-angel-sylvesters-mentors-high-school-student
- 2022 **Summer Computing Camp Instructor**, University of Minnesota

References

Available on Request