Lyle Goodyear

Predoctoral Research Fellow at Microsoft Research NYC
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Education

Stanford University 2022 - 2026
Computer Science with Honors (BS), Theory Subplan *Stanford, CA*
GPA: 3.997, Tau Beta Pi Engineering Honor Society

Research Experience

Predoctoral Research Fellow July 2026
Microsoft Research New York, Economics and Computation Group *New York, NY*

- Advised by Sr. Principal Researcher Markus Mobius

Undergraduate Research Intern June 2025 - Sep 2025
Microsoft Research New England, Economics and Computation Group *Cambridge, MA*

- **Rational DeGroot Learning**: Developed and analyzed extension of DeGroot social learning model. Designed human subject experiment to test theory. Preparing paper for submission to American Economic Review
- Advised by Sr. Principal Researcher Markus Mobius

Research Assistant June 2024 - March 2025
Stanford Department of Management Science and Engineering *Stanford, CA*

- **State Representation for LLMs in Games**: Used LLMs to simulate realistic human economic behavior in multi-agent games. Implemented agent-based network congestion model, designed natural language state representation framework
- Advised by MS&E Professor Ramesh Johari , mentored by ICME Ph.D. candidate Rachel Guo
- Presented at EC '25 Information Economics X LLMs

Supervised Undergraduate Research Jan 2024 - June 2024
Stanford Department of Computer Science *Stanford, CA*

- **Benchmark for Autonomous Scientific Discovery Agents**: Built benchmark to assess LLMs in model building and experiment design; implemented probabilistic models in Python, built interface between simulated environment and LLM agents
- Presented at NeurIPS '25 Scaling Environments for Agents

Coursework

Mathematics & Statistics:

Linear Algebra & Matrix Theory	Mathematical Foundations of Computing	Theoretical Statistics (Graduate)
Causal Inference	Multivariable Calculus	Real Analysis
Probability for Computer Scientists	Combinatorial Optimization (Graduate)	Convex Optimization (Graduate)

Computer Science & Economics:

Social & Economic Networks (Graduate)	Algorithmic Game Theory (Graduate)	Quantum Computing
Matching & Market Design (Graduate)	Design & Analysis of Algorithms	Operating Systems
Randomized Algorithms (Graduate)	Theory of Computation	Programming Abstractions

Technical Skills

Languages: Python, C/C++, JavaScript, Java
Libraries: NumPy, SciPy, Pandas, PyMC, LangChain/LangGraph, oTree
Other: Git, LaTeX

Certifications

Retrieving, Processing, and Visualizing Data with Python Oct 2021
Coursera