Rushit N. Shah

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OBJECTIVE: PhD candidate passionate about solving problems in **deep reinforcement learning** and **multiobjective optimization**.

EDUCATION

Computer Science, *Doctor of Philosophy*	2018 - 2026
University of Illinois, Chicago, IL	GPA: 3.85

WORK EXPERIENCE

Waymo, *Software Engineering Intern* (**Mountain View**, **CA**)   MAY 2025 - AUG 2025

- Designed and implemented multi-objective cost functions to balance performance and safety trade-offs in autonomous driving.
- Integrated and productionized enhancements to the vehicle's real-time traffic prediction stack, improving automated lane-change and maneuver planning performance.
- **Tools**: C++, Python.

iManage LLC, *Data Science Intern* (**Chicago**, **IL**)   MAY 2021 - AUG 2021

- Deployed state-of-the-art LLMs to build a document search and extraction API, leveraging semantic similarity. Designed a hierarchical search strategy, improving speed and accuracy.
- **Tools**: Python, Flask, Huggingface, Weaviate, GraphQL.

RECENT PUBLICATIONS

[1] Ali Farajzadeh, Danyal Saeed, Syed M. Abbas, **Rushit N. Shah**, Aadirupa Saha, Brian D. Ziebart, "Imitation Beyond Expectation Using Pluralistic Stochastic Dominance," *NeurIPS*, 2025.

[2] **Rushit N. Shah**, Nikolaos Agadakos, Synthia Sasulski, Ali Farajzadeh, Sanjiban Choudhury, Brian D. Ziebart, "Imitation Learning via Focused Satisficing," *IJCAI*, 2025.

[3] **Rushit N. Shah**, Brian D. Ziebart, "Minimally Subdominant Decision Transformer," *AAAI Spring Symposium*, 2024.

[4] Saket Srivastava, **Rushit N. Shah**, Catalin Teodoriu, and Aditya Sharma, "Impact of Data Quality on Classification Algorithms," *Journal of Petroleum Science and Engineering*, vol. 219, 111058. 2022

[5] Saket Srivastava, **Rushit N. Shah**, Catalin Teodoriu, "NLP-based Information Extraction for Fault Detection," *Geothermal Resources Council Trans.*, vol. 45, 1311-1323. 2021

RESEARCH PROJECTS

Resolving Causal Confusion via Robust Imitation Learning

- Developed a probabilistic approach combining inverse reinforcement learning with robust optimization, balancing safety and performance. [**Tools**: Python, PyTorch, OpenAI Gym].

Aircraft Fault Detection Using Self-Organizing Maps

- Created a SOM-based pipeline to forecast failures in aircraft, outperforming SVM and neural networks. [**Tools**: Python, MATLAB].

SKILLS

Programming Languages: **Python**, C++, **MATLAB**, GraphQL, SQL.
Frameworks/Libraries: PyTorch, Pyro, HuggingFace, Flask, Scikit-learn.