

SHREEYA KHURANA

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EDUCATION

Carnegie Mellon University - Master of Science in Machine Learning Dec 2023 – Dec 2024

Carnegie Mellon University - Bachelor of Science in Artificial Intelligence Aug 2020 – Dec 2023

- **Relevant Coursework:** Probabilistic Graphical Models, Multimodal Machine Learning, Generative AI, Computer Vision, Natural Language Processing, Convex Optimization, Parallel & Sequential Data Structures & Algorithms, Intro to Computer Systems

WORK EXPERIENCE

Stripe – Software Engineer I, II Jan 2025 – Present

- Built an agentic assistant for merchants using Stripe able to help with tasks from customer support to object creation and business analytics. My work directly resulted in ~\$1M/year savings in support costs.
- Implemented various improvements to RAG system including re-ranking algorithm and text embedding model resulting in ~2x improvement in metrics like MRR.
- Developed an automated conversation quality evaluation pipeline to create a durable system for regression detection and launch confidence
- Developed an MVP for agent intelligence platform that ingests agentic conversations across Stripe and determines insights and improvements and also implements the suggested improvements

Stripe – Software Engineering Intern May 2024 – Aug 2024

- Built an interactive debugger on ML workflow orchestration platform, saving MLEs 20 min per iteration cycle
- Performed prompt engineering and benchmarked LLMs for query intent classification, and gauged performance-cost trade-offs

Amazon Robotics – Software Engineering Intern May 2023 – Aug 2023

- Built a Python package for input validation and manipulation for simulation of a robotic fulfillment center
- Reduced simulation time significantly by catching errors in 48GBs of required data before a simulation job is launched
- Improved interpretability and user experience of simulation tooling and reporting

Cruise – Software Engineering Intern May 2022 – Aug 2022

- Implemented NPC (non-player character) intent conditioning in trajectory prediction ML model
- Trained, deployed, and tested model on internal simulation dataset, achieving >5% increase in collision recall

CMU – Teaching Assistant

- **10-423/623: Generative AI** Aug 2024 – Dec 2024
- **10-315: Introduction to Machine Learning** Jan 2023 – May 2024

RESEARCH EXPERIENCE

CMU Robotics Institute - HARP Lab, Research Assistant Aug 2023 – Jan 2025

- Constructed a driving dataset with continuous per-object situational awareness labels, traffic agent states, and driver eye-gaze collected using a protocol in a VR driving simulator
- Developed a gaze-based ML image segmentation model of a driver's per-object situational awareness in various traffic scenarios
- [Paper](#) accepted to and published in the proceedings of CoRL 2024

PUBLICATIONS

- Modeling Drivers' Situational Awareness from Eye Gaze for Driving Assistance. In 8th Annual Conference on Robot Learning
- Quorum Sensing Re-Evaluation Algorithm for N-Site Selection in Autonomous Swarms. In Proceedings of the 12th International Conference on Agents and Artificial Intelligence (2020). [Volume 1: ICAART, 193-198](#)
- Investigating Potential Causes for the Prediction of Spurious Magnetopause Crossings at Geosynchronous Orbit in MHD Simulations (2023). Space Weather, 21, e2022SW003266 <https://doi.org/10.1029/2022SW003266>
- Magnetopause Standoff Position Changes and Geosynchronous Orbit Crossings: Models and Observations (2023). Space Weather, 21, e2022SW003212. <https://doi.org/10.1029/2022SW003212>

SKILLS

- **Programming:** Python, C++, C, Java, Ruby, R, MATLAB, SML, HTML, CSS, JavaScript
- **ML Frameworks/Libraries:** PyTorch, Tensorflow, NumPy, OpenCV, XGBoost, scikit-learn
- **Certifications:** AWS Certified Cloud Practitioner, AWS Certified Machine Learning – Specialty

EXTRACURRICULAR ACTIVITIES

ScottyLabs – Senior Advisory Board (present), Director of Outreach (2022 – 2023), Chief of Staff (2021 – 2022)

- Created the organization's Outreach Committee and recruited 150+ members
- Spearheaded the Portfolio Development Friday workshop-style event teaching students to build a portfolio website from scratch
- Organized TartanHacks, Pittsburgh's largest hackathon with 300+ participants from 18+ countries