

SAURABH SHAH

saurabhs.site saurabhs@allenai.org [LinkedIn](#) [GitHub](#) [Google Scholar](#)

Education

University of Pennsylvania

Philadelphia, PA

Master of Science in Engineering in Computer Science 3.91 GPA

Jan 2021 - May 2023

- Focused on Algorithmic Theory, Artificial Intelligence, Machine Learning, and Natural Language Processing (NLP)

Bachelor of Science in Engineering in Networked and Social Systems Engineering 3.90 GPA

Aug 2019 - May 2023

- Major combining Computer Science, Systems Engineering, and Economics. Minors in Data Science and Mathematics

Experience

Allen Institute for AI (Ai2)

Seattle, WA

Research Engineer

Feb 2025 - Present

- [OLMo](#) team. Training open language models (OLMos) to write code, use tools, and reason

Apple

Seattle, WA

Machine Learning Engineer

Oct 2023 - Feb 2025

- Siri Natural Language Understanding (NLU). Helped build an agentic Siri planner powered by Apple Intelligence

Allen Institute for AI (Ai2)

Seattle, WA

Research Engineering Intern ([paper](#))

Aug 2023 - Oct 2023

- Tried pretraining [OLMo](#) with [ReLoRA](#), a parameter-efficient *pretraining* method. Learned lots about PyTorch/FSDP
- Accepted into the Association of Computational Linguistics (ACL) 2024 Main Conference - Theme Paper Award.

University of Pennsylvania

Philadelphia, PA

Researcher ([paper](#)) ([talk](#))

Aug 2022 - May 2023

- Explored using free-text for improving the robustness of LLMs to spurious cues in training data
- Accepted into the Association of Computational Linguistics (ACL) 2023 Main Conference

Apple

Seattle, WA

Machine Learning Engineering Intern

May 2022 - Aug 2022

- Siri NLU. Built an internal iOS app in Swift to help test different natural language text-to-intent parses and streamline the counterfactual evaluation flow of the NLU system. Used by annotators and QA testers

Amazon

Nashville, TN

Software Development Engineering (SDE) Intern

May 2021 - Aug 2021

- Robotics-AI Computer Vision. Built a web app with React and AWS to add, search, and view over 300,000 cameras

Personal Projects

The Learning Curve ([link](#))

March 2025 - Present

- A blog where I talk about machine learning research and engineering, amongst other things

Griffin LM + CUDA ([link](#))

May 2024 - August 2024

- I learned some cuda ([link](#)) and wanted to implement [Griffin](#) from scratch in PyTorch with a cuda extension for the scan

Concept Space Embeddings ([link](#))

Feb 2023 - Apr 2023

- Worked with a team of 2 to create a novel method for interpretable embeddings of arbitrary text using LLMs and Decision Trees. Works for classification, regression, clustering, and post hoc explanation of black box models

Compass (Penn Course Recommendation) ([link](#))

Jan 2023 - Apr 2023

- Group of 4. Course recommendation web app. I built the recommendation system with (1) collaborative filtering and (2) text embedding recommendations to recommend courses to students based on (1) perceived difficulty and (2) interests

Poké-GANs (Pokémon Generator) ([link](#))

Mar 2022 - Apr 2022

- Generated complete Pokémon from names. Fine-tuned GPT-3 for types, stats, abilities; CLIP+VQGAN for images from generated text. Trained custom LSTM and GANs from scratch and compared results. Worked with partner.

Comedy Bot ([link](#))

July 2020

- Experimented with ML models to recognize and rate jokes I write and perform for crowds of 150+. Joke datasets from Kaggle. Experimented with Bag of Words/Naïve Bayes and LSTM models. Built with PyTorch

Technical Skills

Languages: Python, TypeScript/JavaScript, Go, CUDA/C++, Java, Haskell, Coq, Swift

Technologies/Frameworks: PyTorch/FSDP, LLMs, HuggingFace, AWS, React, Pandas