

# SAURABH SHAH

[saurabhs.site](https://saurabhs.site) [saurabhs@allenai.org](mailto: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 combines 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 explanations 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 configure, 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

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

May 2024 - August 2024

- I learned some cuda ([link](#)) and tried 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 embeddings to recommend courses to students based on (1) perceived difficulty and (2) natural language 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