

EDUCATION

Princeton University, B.S.E. Computer Science, Summa Cum Laude
(GPA: 3.98/4.00)

Sep. 2020 - June 2024

- Minors in: Linguistics, Cognitive Science
- Honors: Phi Beta Kappa (top 10% of graduating class of ~1600 at Princeton University); Outstanding Junior Research Work Winner (~7 students among all students in Computer Science who did research that semester); Tau Beta Pi (Top 1/8 in junior engineering class); 2021 Shapiro Prize for Academic Excellence, awarded to ~40 first year students of 1300; Walter E. Hope Memorial Debate Prize (winner of class-wide debate competition among all first-years)
- Relevant Coursework: Natural Language Processing; Introduction to Machine Learning; Computer Vision; Introduction to Reinforcement Learning; Advanced Algorithm Design; Ethics and Computing

Princeton University Novogratz Bridge Year Fellowship

Sep. 2019 - Mar. 2020

- Fully-funded selective gap year program in China; lived with host family while volunteering at an NGO

RESEARCH EXPERIENCE

Allen Institute for Artificial Intelligence | Predoctoral Researcher | Seattle, WA **Sep. 2024 - present**

- Full-time researcher on the AllenNLP and Olmo (open language modeling) teams
- Conduct individual research projects in post-training, multiple works published and under review at top conferences
- Collaborate in large group efforts producing state-of-the-art language models like Tulu 3 and Olmo 3
- Peer Reviewed papers at top conferences (COLM 2025, NeurIPS 2025, EMNLP 2025)

Professor Danqi Chen's Lab | Undergraduate Researcher | Princeton, NJ

Jan. 2023 - May 2024

- Research and learn new techniques in Natural Language Processing and Machine Learning
- Co-author on QuRating (ICML Spotlight); led independent projects in lexical retrievers (Junior Independent work prize winner) and evaluation of language models' reasoning (Senior Thesis, preprint)
- Experience with data selection, training, fine-tuning, and evaluation of language models
- Proficient in using PyTorch and HuggingFace libraries for implementing language modeling

High Meadows Environmental Institute | Research Intern | Princeton, NJ

Jun. 2022 - Aug. 2022

- Conducted project in Python to investigate and quantify predictability of biogeochemical ocean drivers
- Selected for competitive Princeton HMEI internship program
- Presented my findings at HMEI symposium in September 2022

PUBLICATIONS

Olmo 3 Technical Report

Team Olmo (incl. **Saumya Malik**, core contributor), 2025.

RewardBench 2: Advancing Reward Model Evaluation

Saumya Malik, Valentina Pyatkin, Sander Land, Jacob Morrison, Noah A. Smith, Hannaneh Hajishirzi, Nathan Lambert. *arXiv preprint arXiv:2506.01937, Under Review*, 2025.

Generalizing Verifiable Instruction Following

Valentina Pyatkin, **Saumya Malik**, Victoria Graf, Hamish Ivison, Shengyi Huang, Pradeep Dasigi, Nathan Lambert, Hannaneh Hajishirzi. *NeurIPS Datasets & Benchmarks*, 2025.

Tülu 3: Pushing Frontiers in Open Language Model Post-Training

Nathan Lambert, Jacob Morrison, Valentina Pyatkin, Shengyi Huang, Hamish Ivison, Faeze Brahman, Lester James V. Miranda, Alisa Liu, Nouha Dziri, Xinxin Lyu, Yuling Gu, **Saumya Malik**, Victoria Graf, Jena D. Hwang, Jiangjiang Yang, Ronan Le Bras, Oyvind Tafjord, Chris Wilhelm, Luca Soldaini, Noah A. Smith, Yizhong Wang, Pradeep Dasigi, Hannaneh Hajishirzi. *COLM*, 2025.

2 Olmo 2 Furious

OLMo Team*, Pete Walsh*, Luca Soldaini*, Dirk Groeneveld*, Kyle Lo*, Shane Arora, Akshita Bhagia, Yuling Gu, Shengyi Huang, Matt Jordan, Nathan Lambert, Dustin Schwenk, Oyvind Tafjord, ..., **Saumya Malik**, ..., Ali Farhadi, Noah A. Smith, Hannaneh Hajishirzi. *COLM*, 2025.

QuRating: Selecting High-Quality Data for Training Language Models

Alexander Wettig, Aatmik Gupta, **Saumya Malik**, Danqi Chen. *ICML*, 2024, Spotlight Paper (Top 1.98% of submissions).

Lost in the Logic: An Evaluation of Large Language Models' Reasoning Capabilities on LSAT Logic Games

Saumya Malik. Senior Thesis, *arXiv preprint arXiv:2409.19012*

SKILLS AND OTHER RESEARCH PROJECTS

- *Programming languages/libraries:* Java, Python, PyTorch, C, HTML, JavaScript, SQL, Verilog
- Undergraduate Research Project Creating a New Lexical Retriever for Open Domain Question Answering (Winner of Outstanding Junior Independent Work Award at Princeton University)
- Undergraduate Course Projects: Fine-Tuning CLIP to make it more performant in natural settings, Implementing and Improving on Neural Radiance Fields (NeRF) for computer vision, Web-App Design and Implementation

OTHER WORK/VOLUNTEER EXPERIENCE

Princeton Univ. Dept. of Computer Science | Teaching Assistant (TA) | Princeton, NJ Jan. 2021 - May 2024

- TA for Algorithms & Data Structures (answer live questions in weekly class); TA for Introduction to Computer Science (teach core concepts and helping with assignment debugging for 4 hours/week)

HomeWorks Trenton | Paid Intern | Trenton, NJ

Jun. 2021 - Aug. 2021

- Evaluated curriculum & usability of an online math adaptive learning tool and prepared user guide for HomeWorks Trenton, a community-based boarding program to empower local women of color
- Designed year-long Math and English curricula (suggested exercises, pacing guides) for HomeWorks tutors in the 2021-2022 academic year supplementing the planned Trenton Public Schools curricula

Yixin and Lianxin NGO | Volunteer Instructor & Event Coordinator | Kunming, China

Oct. 2019 - Jan. 2020

- Lead instructor of 50-student English classes 3x/week for elementary school students from migrant communities, from rural areas to manufacturing hubs; organized class events

ACTIVITIES

Princeton Debate Panel | Social Chair, Tournament Director | Princeton University 2020 - 2024

- Selected to represent Princeton University nationally in competitive Parliamentary debate
- Honors: 1st best individual speaker (of 160+ individuals) and National Champion (1st place of 80+ teams) at Novice National Championships for first-year students (Spring 2021)
- Leadership: Social Chair (organize events and facilitate membership engagement among 50+ members); Tournament Director (coordinated logistics to host tournament of 500+ competitors)

Princeton Naacho South Asian Dance Group | Media Chair | Princeton University

2021 - 2024

Princeton Tigressions A Cappella Group | Alumni Coordination Chair | Princeton University

2022 - 2024

Princeton University Glee Club | Member (Soprano) | Princeton University

2020 - 2024