Aditya Tadimeti

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Education

Stanford University Stanford, CA
B.S. in Computer Science: Artificial Intelligence Track *June 2025*
M.S. in Computer Science: Artificial Intelligence Track *Sept 2025*

Coursework

ML & AI: Building Language Models from Scratch, Machine Learning, NLP, Computer Vision, ML w/ Human Preferences
Math & Statistics: Linear Algebra, Matrix Theory, Multivariable Calculus, Probability, Statistical Inference, Info. Theory
Complexity Theory: Data Structures, Algorithms, Mathematical Computing
Systems & Security: Operating Systems, Networking, Parallel Computing, Systems for Machine Learning, Web Applications

Work Experience

ML Research Intern @ Liquid AI | PyTorch, Python June 2025 —

- Training efficient foundation models for edge devices.

Research Engineer Intern @ Adobe Firefly | PyTorch, Python June 2024 — September 2024

- Trained text-to-image, multimodal reward models. Fine-tuned diffusion models using RLHF techniques.

Intern of Technical Staff @ Cohere | Python, PyTorch January 2024 — April 2024

- Worked on model fine-tuning, data ingestion, evaluation metrics, and pretraining to improve reasoning in LLMs.

SWE Intern @ Amazon | JavaScript, React, MySQL, Java, Git, AWS June 2023 — September 2023

- Developed end-to-end fullstack service to automate supply-chain network graph cost updates, 10k+ lines of code written

SWE Intern @ Oracle OCI | Java, Git, Docker, JavaScript June 2022 — September 2022

- Built fullstack, internal debugging tool used for resolving customer networking issues. Deployed to production.

Data Science @ Project Ronin | Python, Databricks, spaCy, Transformers, PyTorch April 2022 – June 2022

- ML and statistical analysis for clinical note analysis. Built end-to-end pipeline for sectionizing oncology notes.

Organizations

Stanford Computation & Cognition Lab | Adv Prof. Noah Goodman April 2024 — June 2025

- Designed novel compression algorithms to optimize LLM reasoning performance at test-time (ICML '25).

Stanford SNAP Group | Adv Prof. Jure Leskovec. September 2024 — December 2024

- Pretrained 100M+ parameter protein foundation models as an ML systems engineer on H100 cluster.

Stanford NLP Group | NLP Researcher February 2023 — March 2024

- Researched the capability of LLMs to leverage linguistic information for prediction.

Stanford CS Department | Senior Section Leader April 2022 — December 2024

- TA for CS 106A/B (Python/C++). Received 100% on student evals, promoted to senior SL via program tenure.

UC Davis, MIT Sloan | ML Researcher March 2019 – June 2021

- SOTA ML wildfire size prediction via Log. Regression, Decision Tree, Rand. Forest, SVM, Grad Boost., & CNNs.

Publications

Simple, Scalable Reasoning via Iterated Summarization July 2025
Vivek Vajipey*, **Aditya Tadimeti***, Justin Shen*, Ben Prystawski, Michael Y. Li, Noah Goodman
* denotes equal contribution
ICML 2025 Workshop on Long Context Foundation Models
ICML 2025 Workshop on AI for Math

Selected Projects

Language Model from Scratch | PyTorch Spring 2025

- Designed, implemented, and aligned Transformer language models from scratch, using only PyTorch primitives. Included custom tokenizers, model architecture, optimizers, Triton kernels, robust data processing, systems profiling, and RLHF methods like DPO and GRPO for reasoning.

AI Agent Projects | Python, React, JavaScript 2024 - 2025

- Implemented arXiv Deep Research Discord bot that responds to research queries by traversing arXiv, multimodal AI-powered tutor that ingests text, videos, and pdfs, and AI-powered health advisor.

Quantized, Pruned, Accelerated, and Parallelized GPT-2 | PyTorch, C++, OpenMP, ISPC Fall 2023

- Implemented 8-bit quantized inference, iterative magnitude based pruning and speculative decoding for GPT-2.
- Optimized Attention via blocking, fusing, vectorization, and multithreading; implemented FlashAttention on NanoGPT.

Technical Skills

Languages / Frameworks: Python, PyTorch, C++, CUDA, React, C, Java, R, JavaScript, HTML/CSS