Alex Ali

alexali000@gmail.com | +1 (669) 222-0217 | Campbell, California
alexali04.github.io | https://linkedin.com/in/alexali000/ | github.com/alexali04

Education

New York University Aug. 2022 – Dec. 2025
B.A. Computer Science *GPA: 3.90*
Graduate Courses: Bayesian Machine Learning, Information Theory, Deep Learning
Undergraduate Courses: Machine Learning, Natural Language Processing, Algorithms, Linear Algebra

Experience

Undergraduate Research Assistant Dec. 2024 – Present
Andrew G. Wilson's Lab *New York, NY*

- **Scalable Linear Algebra** Designed scalable transformer architectures and implemented efficient attention mechanisms for solving numerical linear algebra problems (ICLR 2026)
- **Diffusion Models** Unified Gaussian, discrete, and simplicial diffusion for discrete sequence data (ICLR 2026)

Data Science Intern April 2025 – Dec. 2025
IKASI AI *San Francisco, CA*

- Built uplift models using double machine learning and causal forests to measure heterogenous treatment effects and personalize customer offers

Machine Learning Research Intern May 2024 – Sep. 2024
Hyperplane, acquired by Nubank *San Francisco, CA*

- Built a credit default prediction model from transaction data using transformer architectures, achieving **3-point AUC lift** over existing baselines
- Explored **foundation model pretraining** for credit modeling, using data from 1 million users
- Developed parallel Vertex AI pipeline for fine-tuning, **reducing train time 5x** across GPU cluster

Projects

NeuralPDE | *Python, PyTorch, GPyTorch, NumPy, Matplotlib* Sep. 2024 - Dec. 2024

- Trained **Gaussian Process** models to solve partial differential equations through marginal likelihood optimization
- Combined neural networks with Gaussian Processes through **deep kernel learning** for uncertainty quantification

Yann LeCun Deep Learning Graduate Competition | *Python, PyTorch* Oct. 2024 - Dec 2024

- Implemented joint-embedding predictive architecture (JEPA) model for self-supervised learning on a computer vision task

Technical Skills

Languages: Python, Java, C/C++, SQL
Frameworks: PyTorch, NumPy, Sci-kit learn, Pandas, MLFlow, Ray, Vertex AI, BigQuery, EconML
Tools: Git, Linux, ZSH / Bash, Vim, Cursor, Docker

Honors

- Received $910 NYU Undergraduate Research Fund award to understand benign overfitting through statistical learning theory
- NYU Presidential Honors Scholar Award 2023 - reserved for top 10% of undergraduates
- NYU Dean's List