

Varun Srivastava

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EDUCATION

University of California, Berkeley

B.A. Computer Science, Mathematics

Graduated Dec 2023

GPA: 3.9/4

EXPERIENCE

Machine Learning Engineer

AdMarketplace

August 2024 – Present

New York, NY

- Designing and training ML time-series models for our firm's algorithmic ad bidding solution, which optimizes the placement of advertisements that see millions of dollars of impressions daily.
- Engineering a full-stack AI-powered product discovery platform using TypeScript/React and Django, implementing LLM integrations to enhance search and recommendations across million-scale product catalog

Founding Engineer

Stork Oracle Network

August 2022 – December 2022

San Francisco, CA

- Designed a high-speed and reliable WebSocket API for live crypto data. The pricefeed served several notable paying DeFi clients, such as Vertex and Apex.
- Scaled the full-stack Python infrastructure up to meet high uptime and low latency requirements for platforms trading millions of dollars daily.

Quantitative Analysis Intern

Dexterity Capital

May 2022 – August 2022

Seattle, WA

- Implemented an evolutionary convergence strategy (CMA-ES) into the firm's financial forecasting model exponentially ($> 100x$) increasing hyperparameter convergence for their training engine.
- Analyzed signals in cryptocurrency markets that became incorporated in the company's proprietary high frequency trading (HFT) market making algorithm, which trades billions of dollars a day.

Data Science Intern

First Republic Bank

June 2020 – August 2020

San Francisco, CA

- Optimized the internal data orchestration (CI/CD) pipeline by designing an Apache Airflow pipeline with scheduled tasks and dependencies, decreasing end-to-end execution time of tasks by 50%.

RESEARCH & PUBLICATIONS

Machine Learning & Vision Researcher | *Berkeley Visual Computing Lab*

December 2023 – May 2024

- Lee, J., **Srivastava, V.**, Jennings, N., Ng, R. "Theory of Human Tetrachromatic Color Experience." *ACM SIGGRAPH*, 2024. Honorable Mention for Technical Papers Awards, spotlighted at the annual conference.
- Researched the emergence of color vision in humans via neurological models, specifically in the case of esoteric conditions such as human tetrachromacy.
- Designed ML-models to investigate neurologically accurate models of the eye, color receptors, and human brain.

Vision & Neuroscience Researcher | *Na-Ji Biophysics Lab*

September 2019 – April 2020

- Implemented computer vision tools in Matlab for researchers to track the pupil size of rats in video data.
- Correlated terabytes of time-series data with pupil measurements to analyze how rodents react to shock stimulus.

PROJECTS

Semantic Finder | do-me.github.io/SemanticFinder

- Building SemanticFinder, a frontend-only semantic search engine powered by LLMs (> 200 Github stars).
- Designed and published a Chrome extension for the web app with TypeScript.

TECHNICAL SKILLS

Languages: Python, C/C++, JavaScript, Go, Java, SQL, Matlab.

Frameworks & development: AWS, React, Jenkins, Docker, Bitbucket, Kubernetes Node, Django.

Data & ML: PyTorch, Huggingface, AWS Sagemaker, GPU computing (MLX, Cuda, Torch).