AVIDAN (AVI) SHAH

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EDUCATION

University of California, Berkeley | May 2025 **Cumulative GPA:** 3.8
B.A. Computer Science & B.A. Applied Mathematics (Statistics Concentration)

Awards & Honors: UCB Dean's List, National Merit Finalist, National AP Scholar, Nationally Certified EMT (2019)

PROFESSIONAL / RESEARCH EXPERIENCE

Millennium Management June – August 2023, June – August 2024
Quantitative Research Intern *New York, NY*

- Performed data ingestion and assisted the maintenance of systematic data pipelines used daily by over 300 different investment teams
- Implemented a generative adversarial network for unsupervised anomaly detection on market data
- Built a robust system for automated data checks to ensure data quality for backtesting in addition to analyzing various market datasets to create trading signals

Berkeley Artificial Intelligence Research (REDS Group) September 2022 – Present
Undergraduate Researcher *Berkeley, CA*

- Conducting research as an affiliate of Lawrence Berkeley National Laboratory under Julien Piet, Chawin Sitawarin, and Professor David Wagner at the intersection of computer security and deep learning
- Designed, built, and tested a model using transformer architecture for unsupervised anomaly detection on keystroke data under SSH connections
- Developing framework for assessing efficacy of transfer attacks on black-box LLMs

MIT Data to AI Laboratory May – August 2022
Undergraduate Researcher *Cambridge, MA*

- Researched and developed ML pipelines for more accurate unsupervised anomaly detection in time series data using the lab's open-source Python libraries
- Built a fully automated, end-to-end workflow for continuously updating public data acquisition, model driven anomaly detection, and visualization via GitHub pages
- Joined the development team of the Signal Intelligence (Sintel) project, and resolved issues with the code of the Orion library

UC Berkeley Department of EECS August – December 2022
Academic Intern *Berkeley, CA*

- Worked on course staff for Structure and Interpretation of Computer Programs (CS61A), and answered students' questions during office hours and discussion sections and assisted TA with delivering mini-lectures during labs.

PROJECTS

The Signal Intelligence Project at MIT DAI Lab May – August 2022
Developer *Cambridge, MA*

- Assisted the development of various ML primitives and pipelines for the open-source Orion library and built OrionATP, a program that makes use of the Orion library to provide consistently updating anomaly detection on any publicly available time series data, complete with graphs and other visual tools

Deep Learning for SSH Traffic Anomaly Detection September 2022 – Present
Undergraduate Researcher *Berkeley, CA*

- Developed three different unsupervised learning models for time series data to detect potential network intruders using inter-keystroke timings in SSH
- Currently building a new model for a semi-supervised learning context combining keystroke data and server information in order to defend against timing attacks

SKILLS, PERSONAL INTERESTS

Skills: Python, Java, SQL, PyTorch, Pandas, Spanish (Limited)
Interests: Strategy Games, Piano, Swimming, Writing Flash Fiction, Emergency Medicine, Sigma Chi Fraternity