AVI GARG

🌐 www.avigarg.me   in www.linkedin.com/in/avi-garg

✉ avigarg@berkeley.edu   ○ www.github.com/gargavi
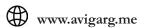
EDUCATION

University of California, Berkeley (Triple Major)   **May 2022**

B.A Statistics with **Honors | 4.00**
B.A Computer Science **| 4.00**
B.A Economics with **Honors | 3.86**

Stat 135: Concepts of Statistics Teacher Assistant
CS61C: Computer Architecture Teacher Assistant
CS 70: Algorithms and Probability Tutor (Private)

Coursework:

Computer Architecture, Neural Networks, Concepts of Statistics, Financial Economics, Computer Security, Advanced Probability, Stochastic Processes, Efficient Algorithms and Intractable Programs,

EXPERIENCE

Citadel Securities | Systematic Trading Intern   **Chicago, IL | May 2021 - Aug 2021**

- Designed and built alpha driven pipelines for the Fixed Income and Equities desk, working primarily in Python and Linux
- Refined backend software to improve the efficiency and latency of the networks and transmissions to the Exchange

Microsoft | Applied Statistics and Data Science Intern   **Seattle, WA | May 2020 - Aug 2020**

- Developed and deployed NLP models, as a part of the WorldWide Learning Team, utilzing Azure ML Studio and Docker
- Performed robust A/B testing and analyzed effectiveness of notifications to improve user retention

Escape-It | Founder   **San Ramon, CA | April 2020 - Prersent**

- Designed, built, and marketed personalized virtual escape rooms to student clubs, companies, and organizations globally
- Reached a total of nearly 100,000 users, with secured contracts up to $1500, including clubs at NYU, UBC, Berkeley
- Stack Includes: React, Express, MongoDB, Redux, React-Router, inside of a Node-JS application

Beyond the Arc | Data Analytics Intern   **San Francisco, CA | Sep 2019 - Jan 2020**

- Automated graph production utilizing Bokeh for HTML embedded interactive data visualization for client data projects
- Scraped information for market research and competitor analysis for clients

HilightAi | Software Engineering Intern   **San Jose, CA | Aug 2019 - Jan 2020**

- Improved Convolutional Neural Networks developed in MXNet to increase accuracy of tracking sports players throughout games
- Designed new hardware methods to further improve tracking of dynamic players and reduce obfuscations

CyberCube | Data Engineering Intern   **San Francisco, CA | May 2019 -Aug 2019**

- Implemented an affinity propagation algorithm to reduce database redundancies and increasing API call efficiency
- Deployed pipeline on an Amazon EMR cluster, utilizing PySpark to peform cleanup in feasible timeframe
- Explored other techniques, including fuzzy logic and NLP, and performed cost and accuracy analysis

RESEARCH

Haas School of Business   **Jan 2021 - Present**

- Performed before and after analysis on the presence of wealth and influence of politics on the landed and financial wealth

U.C Berkeley Economics Department   **May 2020 - Present**

- Scraped historical online census records to understand social mobility on welfare recipients and long term familial impact
- Geocoded addresses and analyzed impact of political influential neighbors on the probability of government employment

Naval Postgraduate School   **Jun 2017 - Mar 2018**

- Analyzed synthetic terrorist networks to glean insights about key players and connectivity across the graph
- Utilized Python and Gephi to analze approximately 1,000,000 connection across 3 thousand nodes

PROJECTS

Stock Market Analysis   **April 2019 - Present**

- Created a Recurrent Neural Network, combined with a pre-trained ELECTRA NLP model to predict momentum based movements in the stock market based on news
- Trained on limited data, but working on adversial training to increase the efficacy of the training sets and increase robustness

Spotify Analysis   **Dec 2018 - Present**

- Developed various models, including Random Forest Classifier, Simple Neural Network, and Multilabel Linear Regression, to continu-ously train and sort a user's Spotify Song library into playlists
- Ingested model endpoint deployed on Azure ML Studio into a Flask Application, with a simple React front-end

SKILLS

Technical   **Python** (Scikit-learn, PyTorch, Pandas, MatPlotLib, SQLAlchemy), **Javascript** (React, Express, Socket), **Scala**, **HTML/CSS**, **SQL**, **C, C+, AWS** (Sagemaker, ERM, EC2, Glue), **Azure (ML Studio, Virtual Machines)**

Other   Cooking, Obstacle Courses, Video Editing, Avid Playlist Creator, Puzzle Enthusiast, Spikeball