

AVI GARG

 www.avigarg.me

 www.linkedin.com/in/avi-garg

 avigarg2000@gmail.com

 www.github.com/gargavi

EDUCATION: University of California, Berkeley (May 2022)

B.A Computer Science

GPA: 4.00

B.A Statistics

GPA: 4.00

B.A Economics

GPA: 3.86

Relevant Coursework

- Probability Theory
- Finance Econ
- Stochastic Processes
- Linear Algebra

Teaching

- Concepts of Statistics, Discrete Probability

EXPERIENCE:

● **Applied Statistics Intern**
Microsoft
Redmond, Washington
May 2020 - Present

- **NLP** and NLU via **PyTorch** using the BERT family on data for the Worldwide Learning Team
- N. D. A

● **Data Science & Analytics Intern**
Beyond The Arc
San Francisco, California
Sep 2019 - Feb 2020

- Large scale **data analysis, data mining, text analysis and data engineering**
- Working with Jupyter notebooks & Python library **Bokeh** for visualization.
- Sped up graph production to allow up to **80 times efficiency**

● **Machine Learning Consultant**
HilightAI
San Jose, California
Aug 2019 - Feb 2020

- Working with Deep Sort and MXNet to track sport player movements
- Designing both hardware and software ideas to target tracking obstructions
- Reducing possible tracking confusion by **25%**

● **Big Data Analyst Intern**
CyberCube
San Francisco, California
May 2019 - Aug 2019

- Working on cleaning database redundancies using an affinity propagation algorithm
- Utilizing Machine Learning algorithms and distributed computing capabilities across an EMR cluster to reduce the time for feature extraction and analysis.
- **Cost reduction by 70% and speed increase by 98%** in information gathering

RESEARCH:

● **Undergraduate Researcher**
U.C Berkeley
Berkeley, California
May 2020 - Present

- Working with Lukas Leucht to analyze the effects of pensions on social mobility
- Scraping online records using **Selenium** as well as Azure Virtual Machines to handle parallelization more efficiently
- Matching records using fuzzy logic on names, age and other attributes

● **Graphic Analyst Researcher**
Naval Postgraduate School
Monterey, California
Jun 2017 - Mar 2018

- Worked with Professor Gera, to establish a foothold in a **new network synthesis** of government data, looking at the connections in established terrorist networks.
- Analyzed over **1 million total** connections between **3 thousand nodes**
- Analyzed the network using **Gephi** to pinpoint key players and recognize patterns

PROJECTS:

● **Stock Market Analysis**
Independent Project
April 2019 - Present

- Creation of a **Recurrent Neural Network** using a Electra Transformer embedding to predict **stock percent changes** of tech stocks based on news data
- Utilizing Azure ML Studio and Bing News API to create a prediction pipeline

● **Escape It Co.**
Collaborative Project
May 2020 - Present

- Founded a site for virtual escape rooms, and developed **full stack application** with rooms built in Javascript and Unity, with a team of 15 collaborators.
- Obtained various contracts for custom rooms, **the largest being \$1500**

● **Spotify Data Analysis**
Independent Project
Aug 2017 - Dec 2018

- Built web application in **Flask** that allows a user to categorize a song to a user's pre defined playlists with a base model that is trained on user specific information
- Used **Random Forest Classifier with Pandas**, Spotify and Genius API's

SKILLS:

- **Languages:** **Python** (Scikit-learn, PyTorch, Pandas, Matplotlib, SQLAlchemy), **Java** (Maven, Spring), Javascript (React, Express, Socket), **Scala, HTML, CSS, SQL** (SequelPro, MySQLWorkbench), **VBA, C, C++**
- **Corollaries:** **AWS** (Sagemaker, ERM, EC2, Glue), **Azure (ML Studio, Virtual Machines)**, **Adobe Creative Cloud** (Premiere Pro, Illustrator, Photoshop), Linux/Unix
- **Numerical:** **Machine Learning/Neural Networks, Linear Algebra, Stochastic Calculus, Markov Chains**
- **Other:** Cooking, Obstacle Course Competing, Video Editing, Avid Playlist Creator, Puzzle Enthusiast