

Alan Liang

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Education

University of California, Berkeley Aug 2016 - May 2021
Master of Engineering in **Electrical Engineering & Computer Sciences (EECS)**
GPA: 3.92/4, *Concentration: Data Science and Systems*
Bachelor of Arts in **Computer Science, and Economics** with *highest honors*
GPA: 3.94/4 (Technical GPA: 3.98/4), *Highest Distinction*

Experience

Boston Consulting Group (BCG X) September 21 - Current
Data Scientist New York, NY

- Owned and built the data science pipeline of a finance tool overseeing \$30bn/yr in sales used to plan and forecast investment allocations for a retail pharmacy chain.
- Routinely liaised with clients and engineering teams to identify and implement features from user request to testing.
- Implemented ML models and optimization problems to improve space productivity for a large grocery chain, increasing projected sales lift by 4%.
- Built a deep neural network for product embeddings to determine customer needs and thus optimize assortment.
- Scaled up ML workflows by implementing parallelization and orchestration using PySpark and Airflow, leading to 4x speed-up.
- Conducted statistical analyses using diff-in-diff based methods to measure sales impact of a pilot in over 1000 stores, and set up store matching for an upcoming pricing pilot.
- Managed team sprints and to ensure timely releases and deliverables.

QuantCo June - August 2019
Data Science Intern San Francisco, CA

- Created market pricing models on behalf of QuantCo for a large market-maker client using R on Hive, reducing error by 50% from existing models.
- Implemented and productionalized models on GCP w/ tensorflow, integrating the deployment process into the client's machine learning pipelines for production.

Seele Tech May - August 2018
Software Engineering & Data Analytics Intern San Francisco, CA

- Implemented new data pipeline of social metrics from data collection to presentation of KPIs, using AWS for deployment.
- Created bots for alerts and auto moderation in channels with 30k+ members, using NLP for sentiment monitoring and ML classifiers for spam detection.

Microsoft May - July 2017
Program Management Intern Shanghai, China

- Worked on customer acquisition for Azure IoT tooling through SEO, A/B testing, customer development. Conducted web traffic and user telemetry analysis using SQL to improve conversion and optimize user experience, doubling monthly traffic and attached users.

Division of Data Sciences, UC Berkeley January 2018 - August 2021
Team Lead Berkeley, CA

- Led team to grow data science education initiatives across 200+ institutions, growing team from 1 to 20+ people and greatly expanding team responsibilities.
- Managed an agile development team to build open-source course infrastructure, including auto-grading and telemetry logging software used by 8k+ students.
- Ran a 100k+ student edX MOOC, providing active support to students online.

Skills

Python, R, SQL
Pandas, NumPy, SciPy
Apache Spark, Databricks
Git, Docker, Jira, CI/CD
Azure and other cloud services

Projects

Augmented Synthetic Controls

Built and refined an open source R package w/ UC Berkeley stats & economics faculty implementing the augmented synthetic control method, used to analyze treatment effects in panel data settings.

Occupancy Taxes

Conducted causal inference of changes in price and quantity in the short-term rental market caused by a newly introduced occupancy tax in Boston, using the synthetic controls method.

Automatic Query Reasoning

Developed a SQL parser and auto-grader, used by 1000 students per semester. Capstone project for M,Eng advised by Prof. Alvin Cheung.

Course Co-Founder

Lecture for the first data science & economics course at Cal to 200 students. Create interactive assignments based on real-world data in Jupyter Notebooks.

Teaching Assistant

Instruct discussion & lab for Data 8: *Foundations of Data Science* and Econ 140: *Econometrics*. Lead the infrastructure TA team.