

# Peter Zhang

🏠 2243 Dwight Way, Berkeley, CA 94704

☎ (240) 994-2204 ✉ petez@berkeley.edu 📧 petezh 🌐 www.peterzha.ng

## Education

### University of California, Berkeley

Berkeley, CA

*Computer Science, Economics, & ORMS B.A., Data Science Minor; 3.98 GPA*

2020–2023

**Coursework:** DS&A, Computing Theory, ML+AI, Data Science, Computer Architecture, Probability, Stochastic Processes, Inference, Macro/Microeconomics, Behavioral Economics & Finance, Econometrics, Real Analysis

**Activities & Societies:** Voyager Consulting, Traders at Berkeley, Debate Society of Berkeley, The Daily Californian, Computer Science Mentors, Berkeley Economic Review, Upsilon Pi Epsilon, Chinese Student Association

## Research Experience

### Berkeley Artificial Intelligence Lab

Berkeley, CA

*Student Researcher*

Jan 2022–Present

- Research scalable oversight with Ruiqi Zhong, advised by Profs. Jacob Steinhardt & Dan Klein
- Fine-tuned large language models for social science applications, e.g. measuring political slant.
- Built meta-dataset of 60+ interdisciplinary text mining tasks to assess hypothesis discovery.
- Improve and assess hypothesis discovery algorithm, achieving 5-100x speedups and improving insight.
- Experiment with novel applications of language models for collaborative forecasting and decision-making.

### Moore Accuracy Lab

Berkeley, CA

*Research Assistant under Prof. Don Moore*

Sept 2022–Present

- Create and analyze surveys examining the effects of phrasing and incentives on confidence in judgement.
- Lead research project comparing the calibration of humans and language models on multiple-choice tasks.

### Malmendier Group

Berkeley, CA

*Research Assistant under Prof. Ulrike Malmendier*

Jan 2022–Present

- Scrape, preprocess, and analyze dozens of datasets related to macroeconomics, CEO pay, business activity.
- Review literature, draft/propose sections, and copy edit for book proposal about experience effects.
- Apply language models to automate and improve annotations of business events.

### Center for Effective Global Action

Berkeley, CA

*Research Apprentice*

Jan 2021–May 2021

- Developed an R Shiny/markdown showcase and drafted a set of guidelines for improving policy analysis.
- Assessed and identified weaknesses in 5 policy-relevant papers using R, Stata, Python, and L<sup>A</sup>T<sub>E</sub>X.

### National Cancer Institute

Rockville, MD

*Research Assistant*

Jul 2019–Oct 2021

- Reformatted gene expression results from cancer drug trials for efficient, on-demand user query.
- Developed R Shiny dashboard with one-click, Electron interface, published as 1st-author in Bioinformatics.

### National Institute of Standards and Technology

Gaithersburg, MD

*Economics Research Intern*

May 2020–Sep 2020

- Annotated 57 papers on resilience planning to assess the role of co-benefits in recent benefit-cost analysis.
- Published user manual & case study for Edge\$, decision-making software to help community leaders.

### National Institute of Standards and Technology

Gaithersburg, MD

*NLP Research Intern*

Jun 2019–Aug 2019

- Designed rule-based Python scripts to preprocess corpora and construct subject-predicate-object tuples.
- Improved LDA topic modeling with root-and-rule preprocessing across multiple corpora for search tools.

## Professional Experience

### Susquehanna International Group

Bala Cynwyd, PA

*Quantitative Trading Intern*

Jun 2022–Aug 2022

- Designed and built NLP model to predict trading volume that was immediately used by traders in production.
- Completed rigorous finance/options curriculum; competed in mock trading and various strategic games.

## Bill and Melinda Gates Foundation

Seattle, WA

*Contract Consultant*

Sep 2021–May 2022

- Synthesized 200+ publications and interviewed 11 topic experts on medical product quality in Africa.
- Led team of 5 to present 180-page report to 30 stakeholders which informed foundation investments.

## Intel Foundry Services

Santa Clara, CA

*Contract Consultant*

Jan 2022–May 2022

- Led team of 5 to benchmark competitors and scrape financial data from investor reports.
- Built dashboard to store data, forecast trends, and analyze competitor customers, which is still in use today.

## Uber Eats

San Francisco, CA

*Data Analyst*

Sep 2021–Dec 2021

- Segmented 2M eaters via a random forests, PCA, and clustering approach on massive behavioral dataset.
- Modeled effect of discounts on Eats pass conversion and provided strategy recommendations for each cluster.

## Amazon Web Services

Arlington, VA

*Software Development Engineer Intern*

Jun 2021–Aug 2021

- Designed and developed a scalable, serverless tool to notify customers of service issues with a flexible API.
- Rapidly tested and iterated in an agile workflow, using Java/Typescript and AWS services (CDK/SQS/Lambda).

## Publications

- **Zhang, P.**, Palmisano, A., Kumar, R., Li, M.C., Doroshov, J.H. and Zhao, Y., 2022. TPWshiny: an interactive R/Shiny app to explore cell line transcriptional responses to anti-cancer drugs. *Bioinformatics*, 38(2), pp.570-572.
- Helgeson, J.F. and **Zhang, P.**, 2020. Economic Decision Guide Software (EDGe\$) Online Tutorial: Wildland-Urban Interface (WUI) Case Study. US Department of Commerce, National Institute of Standards and Technology.

## Teaching Experience

### Berkeley CS 61A

Berkeley, CA

*Tutor/Content Mentor*

Sep 2020–May 2022

- Delivered 100+ hours of live instruction via section & lecture over 5 semesters to 30+ students.
- Produced 25+ worksheets for 100 mentors over 3 semesters and reduced overhead by several hours.

### The Bronx High School of Science

Bronx, NY

*Assistant Debate Coach*

Aug 2020–May 2021

- Led 2 practices/week for 30+ debaters and drilled 1-on-1, qualifying to national championship.
- Judged and coached at 18 national, multi-day tournaments, providing detailed feedback to 100 competitors.

### Foundation for Advanced Education in the Sciences

Bethesda, MD

*Teaching Assistant*

Jan 2021, Mar 2021

- Taught two sessions of a 3-week introductory Python course with 15 graduate students at the NIH.
- Facilitated Slack discussions, held 10+ 1-on-1 office hours, and graded student assignments.

## Skills

**Languages:** Python, R, Java/Kotlin, JS/React,  $\text{\LaTeX}$ , SQL, functional programming, HTML5/CSS

**Libraries:** Numpy/Pandas, PyTorch/Tensorflow, Huggingface, Dash/Shiny, Selenium/BeautifulSoup

**Tools:** Git/Terminal, Slurm, Azure/AWS, WordPress, Electron

## Awards

Citadel World Finals Data Open, 4th Place (of 30,000)

Dec 2022

Citadel West Coast Data Open, 3rd Place (of 1,000)

Apr 2022

UC Berkeley Leadership Award; 3x Recipient

Jul 2020, Aug 2021, Aug 2022

DSS x NIB Datathon for Social Good, 1st Place

Nov 2021

USA Computing Olympiad, Platinum Division

May 2020