Peter Zhang

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Education

University of California, Berkeley — **Berkeley, CA**

Computer Science M.S.; Advised by Jacob Steinhardt — 2023–2024

Computer Science, Economics, & ORMS B.A., Data Science Minor; 3.92 GPA — 2020–2023

Coursework: DS&A, ML/AI/DL, Theory of Computing, Data Science & Inference, Computer Architecture, Probability/Stochastics, Macro/Micro/Econometrics, Behavioral Economics/Finance, Analysis+LinAlg

Activities & Societies: Voyager Consulting, Traders at Berkeley, ML@B, CSM, UPE

Research Experience

Berkeley Artificial Intelligence Lab — **Berkeley, CA**

Researcher under Jacob Steinhardt — Jan 2022–Present

– Fine-tuned large language models for social science applications, e.g. measuring political slant.
– Built OpenD5, a meta-dataset of 700 interdisciplinary tasks, published 2nd-author in NeurIPS 2023.
– Improved and assessed hypothesis discovery algorithm, achieving 5-100x speedups and improving insight.
– Studying 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–Dec 2022

– Scraped and analyzed dozens of datasets related to macroeconomics, CEO pay, business activity.
– Reviewed literature, drafted/proposed sections, and copy edited for book proposal about experience effects.
– Applied 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 LaTeX.

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

Jane Street — **New York, NY**

Trading Intern — Jun 2023–Aug 2023

– Collected dataset of IPO events and built models to predict trading behavior on and following an IPO.
– Modeled theoretical volatility for identical options of different expirations and developed tradeable strategies.

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.**, 2023. Taking Advice from ChatGPT. arXiv preprint arXiv:2305.11888.
– Zhong, R., **Zhang, P.**, Li, S., Ahn, J., Klein, D. and Steinhardt, J., 2023. Goal driven discovery of distributional differences via language descriptions. arXiv preprint arXiv:2302.14233.
– **Zhang, P.**, Palmisano, A., Kumar, R., Li, M.C., Doroshow, 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 Economics   **Berkeley, CA**
Graduate Student Instructor   Jan 2024–May 2024
– 20-hour graduate student instructor for ECON 119, *Psychology and Economics*.
– Responsible for teaching discussion sections, creating course materials, hosting office hours, and grading.

Berkeley EECS   **Berkeley, CA**
Tutor; Mentor; Reader   Sep 2020–May 2023
– Delivered 100+ hours of live instruction via section & lecture over 5 semesters to 30+ students for 61A.
– Produced 25+ worksheets for 100 mentors over 3 semesters and reduced overhead by several hours for 61A.
– Graded homeworks and exams for CS 189, the introductory machine learning course.

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, 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	Dec 2022
Citadel West Coast Data Open, 3rd Place	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