Jane Zou

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Education

University of California, Los Angeles, *B.S. Statistics & Data Science*   2021 - 2024

    GPA 3.914/4.000

Cornell University, *Machine Learning Foundations*   2022 - 2023

    GPA 4.00/4.00

Publications

1. Vahid Mohammadzadeh, Sean Wu, Sajad Besharati, Evan Walker, Esteban Morales, Mahshad Rafiee, Yasamin Banaei, Arthur Martinyan, **Jane Zou**, Fabien Scalzo, Joseph Caprioli, Kouros Nouri-Mahdavi. "An Artificial Intelligence-Based Prognostic Model for Prediction of Functional Glaucoma Progression from Clinical and Structural Data." *Investigative Ophthalmology & Visual Science* 65, no. 7 (June 2024): 1624.

2. Maryam Ashrafkhorasani, Erica Su, Sajad Besharati, Vahid Mohammadzadeh, **Jane Zou**, Robert Weiss, Kouros Nouri-Mahdavi. "Total Deviation vs. Absolute Threshold Sensitivities for Measuring Pointwise Rates of Change." *Investigative Ophthalmology & Visual Science* 65, no. 7 (June 2024): 1871.

3. Sajad Besharati, Vahid Mohammadzadeh, Maryam Ashrafkhorasani, Golnoush Mahmoudinezhad, Alaiza Guerrero, **Jane Zou**, Mahshad Rafiee, Evelyn Kung, Qiang Fu, JoAnn Giaconi, Anne L. Coleman, Simon K. Law, Joseph Caprioli, Kouros Nouri-Mahdavi. "Comparative Outcomes of Primary Trabeculectomy with Mitomycin C in Patients of Hispanic vs. European Descent." *Investigative Ophthalmology & Visual Science* 65, no. 7 (June 2024): 3516.

4. Judy Figueroa, Maryam Ashrafkhorasani, Vahid Mohammadzadeh, Sajad Besharati, **Jane Zou**, Masood Mohammadi, Kouros Nouri-Mahdavi. "Detection of Functional Glaucoma Progression: 24-2 Visual Field Central Points vs. 10-2 Visual Fields." *Investigative Ophthalmology & Visual Science* 65, no. 7 (June 2024): 4814.

5. Vahid Mohammadzadeh, Sean Wu, Sajad Besharati, Mahshad Rafiee, Yasamin Banaei, **Jane Zou**, Arthur Martinyan, David Zhang, Fabien Scalzo, Joseph Caprioli, Kouros Nouri-Mahdavi. "Prediction of Functional Glaucoma Progression Combining Baseline Clinical and Structural Data with a Deep Learning Model." *2024 American Glaucoma Society Annual Meeting* (March 2024).

Work Experience

Jules Stein Eye Institute   May 2023 - June 2024

Research Assistant

Automated visual field and display examination detection by imputing over three decades of missing patient data, enhancing diagnostic accuracy. Achieved a 30% improvement in model reliability through cross-functional collaboration and fine-tuning. Integrated advanced AI models into clinical workflows, optimizing healthcare operations. Enhanced healthcare datasets by merging NHANES and CDC data sheets, updating inclusion criteria, and conducting statistical analyses.

PricewaterhouseCoopers   June 2023 - Present

Data Scientist

Developed an automated global tax incentives matching system with generative AI, cutting processing time by 99% and boosting accuracy by 85%. Built frontend with Streamlit and backend with FAST API; integrated Azure Form Recognizer for document parsing with over 99% accuracy. Enhanced predictive ML models using demographic profiling and NLP. Improved user engagement for a career exploration nonprofit with online career tools. Advanced data visualization with Power BI after 80 hours of training; provided crucial insights through statistical analysis and Python.

Chelle AI   January 2024 - March 2024

Project Lead

Developed knowledge graphs by extracting and structuring data from NextJS using web scraping techniques in Python. Utilized NetworkX library to construct and analyze the graph representations, enabling the visualization and exploration of relationships among the extracted entities and their attributes.

OkTY   September 2023 - December 2023

Project Lead

Led a team of five in the comprehensive cleansing and analysis of five diverse datasets containing financial and merchant information, spanning a two-year snapshot of spending data, uncovering nuanced trends in user spending habits, including location-based patterns and distinctive merchant preferences.

National Student Data Corp   July 2023 - September 2023

Project Lead

Spearheaded cross-functional data science teams, providing strategic direction and overseeing end-to-end project execution to ensure the timely delivery of data-driven solutions. Led the conception and execution of pedestrian data analysis, culminating in a successful showcase. Proficient in implementing Agile methodologies to optimize project workflows, leveraging expertise in machine learning techniques and algorithms to guide the development of predictive models. Additionally, implemented process improvements and best practices, enhancing efficiency and effectiveness in project execution.

SARE Ladies   April 2023 - June 2023

Project Consultant

Applied label encoding to survey responses dataset, assigning unique numerical values to each category. Developed a random forest feature importance ranking model to identify characteristics impacting the confidence

of survey respondents, focusing on ethnicity and whether they identify as real estate investors.

EpiData   September 2022 - March 2023

Project Lead

Led a team of five in the development of a machine learning pipeline for streaming Internet of Things (IoT) data utilizing the EpiData platform. Successfully implemented various regression and classification models, resulting in insightful findings from the streaming data collected from a wireless home sensor and time step accelerator.

Epicenter for Action Research   March 2023 - May 2023

Project Manager

Led the development of a user-friendly platform for reserving affordable parking spots for the LA Olympics 2028, utilizing UX design expertise. Conducted user research, created wireframes, and performed competitive analysis. Proficient in Figma for designing wireframes, mockups, and prototypes. Applied user-centered design principles, conducted market research, and translated business objectives into actionable design solutions. Applied design thinking methodologies to drive innovation and problem-solving.

American Express   June 2022 - December 2022

Machine Learning Intern

Led a team of three in developing an end-to-end machine learning pipeline employing unsupervised learning techniques. Calculated arrival probability from consumer campaign data to optimize marketing investment, identifying high ROI consumers. Proficient in Python libraries including Pandas, NumPy, and Scikit-learn, utilized various machine learning techniques such as decision trees, neural networks, and ensemble methods like random forests for model development in Jupyter Notebook.

Innovate@UCLA   March 2022 - May 2022

Project Manager

Directed the development of a user-friendly platform HYREUS, a recruiting platform designed for young adult job seeker. Conducted user research, devised wireframes, and executed competitive analysis. Proficient in Figma for crafting wireframes, mockups, and prototypes. Applied user-centric design principles, conducted market research, and translated business goals into practical design solutions. Employed design thinking methodologies to foster innovation and problem-solving.

HomeDescription   January 2022 - June 2022

Project Consultant

Developed a custom three-dimensional scatterplot function in my programming work to effectively visualize trends between two variables of interest and price; generated correlograms to illustrate correlation coefficients between the relevant variables; conducted web scraping and HTML parsing on Zillow data.

Savi   October 2021 - December 2021

Project Consultant

Developed a heatmap visualization in Python to model correlations between variables of interest and user paid conversion rate, alongside creating histograms to assess the impact of marital status on binary payment status.

Projects

Sustainable Los Angeles Grand Challenge   September 2023 - Present

Research Assistant

Contribute to innovative projects aimed at addressing environmental challenges in the Los Angeles area. Strong analytical skills and passion for making a positive impact on local communities through research and collaboration.

QWER Hacks   January 2023

Designed and prototyped "Homeless Simulator," a web and mobile app game addressing the experiences of houselessness for queer women of color in LA. Developed storyline and character biographies, utilizing storyboards, graphic design, and game scripts to shape the narrative. Proficient in troubleshooting code bugs in React JS projects in localhost environments. Secured first place in the housing insecurity track, earning the Major League Hacking fellowship interview fast-track certificate. Experienced in producing and designing video game scripts. Skilled in written and verbal communication, including interviewing leading experts in public policy and public health researchers.

American Statistical Association DataFest   May 2022

Created data visualization models to illustrate correlations within drug resistance efficacy player datasets and conducted research on adolescent behavior and video game prevention programs. Proficient in Python for data visualization, cleaning, and analytics using Matplotlib, Seaborn, and Pandas. Experienced in collaborative team environments, including delegation, presentation, and project debriefing. Demonstrated strong public speaking and presentation skills through industry presentations on ML models.

Awards

Visa & Society of Women Engineers Scholarship	May 2023
Third Place Break Through Tech AI @ UCLA, MIT, Cornell Tech AI Studio	March 2023
UCLA Machine Learning Top Contributor	March 2023
Major League Hacking Housing Insecurity First Place	February 2023
Major League Hacking Best Mobile App	February 2023
Orange County Centennial Scholarship	August 2021
NCWIT Aspirations in Computing Affiliate Honorable Mention	June 2021
Azusa Pacific University President's Scholarship	June 2021
Voice of Democracy Post 10694 Santa Ana First Place	June 2021

Professional Membership

Undergraduate Research Scholars Program	2023 - 2024
AT&T Technology Academy	2023
Undergraduate Mathematics Council	2022 - 2024
College Scholars Program	2021 - 2024
DataResolutions	2021 - Present
National Student Data Corp	2023
Innovate@UCLA	2022 - 2023
Society of Women Engineers	2021 - 2023

Technical Experience

Programming Languages: Python, R, SQL, C++, HTML, CSS, JavaScript, Tableau, Power BI, Microsoft Excel, Streamlit

Machine Learning: Supervised & Unsupervised Learning, Natural Language Processing (NLP), Time Series Analysis, AI Ethics, Responsible AI, Feature Engineering

Tools & Platforms: FAST API, OpenAI, Langchain Retrieval Augmented Generation (RAG), Figma, NetSuite, Agile & Scrum, GIS, Canva, Jira, Slack, Google Analytics, Git