Priscilla Zhao

Email: puzhao@stanford.edu • Mobile: (650) 353-8145

Education

Stanford University — Stanford, CA
Master in Education Data Science — *Sep 2021 - Present*

- **GPA**: 4.00/4.00
- **Highlighted Coursework**: Data Management and Data Systems (SQL); Reinforcement Learning (Python, Pytorch); Natural Language Understanding (Python, Pytorch); Curiosity in Artificial Intelligence (Python); Experimental Research Design and Analysis (STATA); Powerful Ideas for Learning Sciences and Technology Design; Quasi-Experimental Research Design Analysis (R); Parenting and Family Relationships in Childhood

University of Michigan — Ann Arbor, MI
Bachelor of Science in Pure Mathematics and Communication and Media — *Jan 2018 – Dec 2020*

- **GPA**: 3.816/4.00
- **Highlighted Coursework**: Complex Analysis; Real Analysis; Probability Theory; Linear Algebra; Introduction to Numerical Methods; Honors Differential Equations; Modern Algebra; Introduction to Differential Geometry; Education Policy; Elementary Programming Concepts (C++); Digital Media Foundation (HTML and CSS)

Research Experiences

Spark Lab, Stanford University — Stanford, CA
Research Assistant — *Jan 2022 – Present*
Faculty Advisor: Professor Jelena Obradović

- Collected 32 kids' social-emotional learning (SEL) scores with tablet from San Francisco Unified School District Pre-K centers and recorded diverse kids' differences.
- Conducted data cleaning on the collected data using R and applied the generalized linear mixed-effects model to analyze the association between SEL score and children's characteristics.

Digital Learning Lab, UC Irvine — Remote
Research Assistant — *Jan 2021 – Present*
Faculty Advisor: Professor Mark Warschauer, Professor Penelope Collins

- Coded 50 observational videos with CHAT coding scheme to record the bilingual interactions between children and parents and e-books.
- Leveraged STATA and Python to clean and analyze the clickstream data, children's vocabulary scores of pre- and post-tests, and children's satisfaction survey, and trained structural equation modeling to fit these data.
- Led a group to study the association between e-book features and children's learning outcomes and motivation, conducted literature review on the topic, and presented it on AERA poster session.
- Led a group to investigate the effects of human-computer interaction(HCI) on children learning outcomes by analysing children's gaze, posture, distance and gesture during e-book reading and running deep learning models, e.g. hidden markov model, to predict their attention level.

Education Policy Initiative (EPI), University of Michigan — Ann Arbor, MI
Research Assistant — *Jan 2020 – Dec 2020*
Faculty Advisor: Professor Brian Jacob, Professor Gloria Yeomans-Maldonado

- Conducted data cleaning and data analysis using EPI early childhood education (ECE) enrollment data in STATA, then compared the cleaned dataset to Michigan official data to ensure the reliability of the data work.
- Examined correlations between ECE programs, enrolled students' characteristics, and program features using STATA, then made visualizations of these correlations using Tableau.
- Participated in the policy memo writing of Michigan public-funded ECE programs, specifically in the description of target population, teacher qualifications, curriculum and settings of those programs.

GradeCraft Measurement, University of Michigan — Ann Arbor, MI
Research Assistant — *May 2020 – Dec 2020*
Faculty Advisor: Professor Barry Fishman

- Conducted literature review on gameful learning and competency-based education, and created competency trait tracking for students at the University of Michigan.

- Designed survey for the study of COVID-19 resilient teaching, cleaned and analyzed more than 1000 students' responses using R, with a focus on comparing GradeCraft courses and other courses.
- Evaluated the impacts of pandemic online learning policy on GradeCraft students by tracking and analyzing their interaction with the system pre-and peri-the pandemic using R.
- Built statistical models between gameful level, students' satisfaction, and learning outcomes in R, focusing on comparing the learning effectiveness and competency development between gameful courses and other courses.

CS and Capstone Projects

Predicting Stackoverflow Post Answer Votes Stanford, CA
Final Project, CS145 *Sep 2021 – Dec 2021*
Faculty Advisor: Dr. Narayanan Shivakumar

- Used SQL to explore the stackoverflow dataset from BigQuery Public Dataset, analyze the popularity of stack overflow's answers based on its votes and other characteristics, and visualize the correlations; created and trained the prediction model of the popularity of stackoverflow's answers with logistic regression, and improved the performance of the model using boosted tree classifier.

Text Summarization For News Stanford, CA
Final Project, CS224U *MAY 2021 – Present*
Faculty Advisor: Professor Christopher Potts

- Literature reviewed text summarization models, e.g. frequency-based model and Seq2seq model, determinations of summary quality, and evaluation metrics, e.g. latent semantic analysis and ROUGE, run frequency-based model and Seq2seq(RNN) model with media text, run ROUGE-1;-2;-L to compare and analyze baseline and Seq2seq model, and wrote the final report

Model Predictive Curiosity for Self-Supervised Dynamics Models Stanford, CA
Final Project, EDUC 234 *MAY 2021 – Present*
Faculty Advisor: Professor Nick Haber

- Conducted literature review on curiosity-driven learning of physical dynamics and model predictive control(MPC) paradigm, and designed model predictive curiosity(MPCu) paradigm.
- Generated 50000 training scenarios of a force being applied to a circle adjacent to a tower in a Box2D environmen and trained a dynamics model to predict forward motion of circle, and a curiosity model to predict the loss in the dynamics model.

Teacher Attrition in Pennsylvania Stanford, CA
Research Project *Sep 2021 – Present*
Faculty Advisor: Professor Daniel McFarland, Dr. Sanne Smith

- Merged and cleaned 2014 - 2020 professional personnel individual staff report of Pennsylvania with R, conducted teacher attrition analysis by calculating exit rate based on teachers' years of experiences, job category and characteristics, and created visualizations of teachers' exit behaviors across years.

Manuscripts and Reports

- **Pu, Z.** et al.(2022, April) Investigating the Association Between E-Book Interactive Features and Story Comprehension During Bilingual Shared Reading [Paper presentation]. *2022 AERA Annual Meeting, San Diego, CA, USA.*

Teaching and Community Service Experience

Course Assistant and Designer for Comm362 (Digital Media Foundation) Ann Arbor, MI
University of Michigan, Department of Communication & Media Studies *Sep 2020 – Dec 2020*
Instructor: Professor Christian Sandvig

Volunteer Teaching Assistant, External Outreach Program of UMich Ann Arbor, MI
Super Saturdays in Ypsilanti *Oct 2020 - Jun 2021*

Awards, Honors, and Scholarships

The Fulton Fellowship Fund; Stanford GSE leadership fellowship; Claude Sifritt Undergraduate Award, 2020; James B. Angell Scholar, 2019; University Honors, two terms.

Skills

Python, Pytorch, R, SQL, STATA, HTML, CSS, Tableau, Photography