

BAITING ZHU

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EDUCATION

Stanford University

M.S. in Computer Science
Incoming Student

Stanford, CA

Expected: June 2025

University of California, Los Angeles

B.S. in Math of Computation, Minor in Statistics
Major GPA: 3.94 / 4.00

Los Angeles, CA

Sept 2019 - Mar 2023

PUBLICATIONS

Zhu, B., Dang, M., and Grover, A. Scaling pareto-efficient decision making via offline multi-objective rl. In International Conference on Learning Representations (ICLR), 2023. [Project Page](#), [Poster](#), [Codes](#), [Tweet](#), [ArXiv](#), [OpenReview](#)

RESEARCH & PROFESSIONAL EXPERIENCE

Microsoft Research Asia (MSRA)

Research Intern (ML Group – Deep Reinforcement Learning)

Beijing, China

Jan 2023 – Present

- Sample-efficient world model for Meta RL. Guiding decision through preferring drop in context reconstruction entropy
- Test-time exploration in visual navigation tasks

Machine Intelligence Group (MINT)

Researcher

Los Angeles, CA

Mar 2022 – April 2023

- Led research project on Multi-Objective Reinforcement Learning (MORL). *1st author publication in ICLR 2023*
- Proposed and released Dataset for MORL (D4MORL): the first offline MORL dataset and benchmark
- Proposed and released Pareto Efficient Decision Agents (PEDA): a novel family of *offline* MORL algorithms. The first offline MORL algorithms that take high-dimensional and continuous action control through a *single* model
- Showed that PEDA provides an excellent approximation of the Pareto-front with appropriate return conditioning, as measured by the hypervolume and sparsity metrics

Visual Intelligence Lab

Research Assistant

Los Angeles, CA

July 2021 – June 2022

- Implemented RL environment for POMDP algorithms. Reduced setup time by 70%
- Implemented and tested POMDP algorithms such as PBVI in different environments and parameter settings

Kuaishou Technology (1024.HK)

Deep Learning Engineer (Search Tech)

Beijing, China

Mar 2021 – July 2021

- Discovered deficiencies in BERT search model by performing high-level data analysis and visualization in R
- Resolved deficiencies and boosted the model's Group-AUC from 73% to 79% by data cleaning, feature engineering, and [multi-sample dropout](#). Achieved a higher click ratio as validated by online AB-Testing
- Led the data pipeline project which produces 100K data entries weekly. Improved tagging pass rate from 50% to 95%+
- Implemented protocols such as abnormality probing and positive/negative sample balancing using SQL and Python

PROJECT EXPERIENCE

Trajectory Prediction for Autonomous Vehicles

Computer Vision

Los Angeles, CA

Apr 2022 – May 2022

- Improved the Multipath++ trajectory prediction model by leveraging Transformer encoders/decoders layers.
- Achieved higher evaluation metrics and better empirical results, check our [\[Project Page\]](#) and [\[Video\]](#)

Explaining Graph Neural Networks (GNN)

ML – Explainability

Los Angeles, CA

Apr 2022 – May 2022

- Explaining and reasoning GNN models such as [GCN](#) by identifying the most influential subgraphs. Compared our design with previous approaches such as [Grad-CAM](#) and [SAG](#)
- Implemented demo had comparable performance with the [GNN-Explainer](#) on [MUTAG](#) datasets

DataFest – Data Science Hackathon

Winner, Best Visualization (1st/100 teams)

Los Angeles, CA

May 2020

- Studied the shift of consumer demand since the start of COVID-19 using commodity price and search trend data
- Scrapped the historical price from Amazon using Python. Imputed missing values and standardized values
- Identified shift in consumer demand during different pandemic periods by representing supply with commodity price and stocking data and demand with Google Search Trends data of the same keyword
- Visualized data to deliver findings through various interactive and animated plots. Check our [\[Panel\]](#) and [\[Video\]](#)

OTHERS

Coding: Python, C++, R, PostgreSQL, LISP | **Interests:** Research, Machine/Deep/Reinforcement Learning, Data Science