Tianyi Zhou

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RESEARCH INTEREST

My research interest focuses on machine learning, reinforcement learning, constraint learning, and life-long(continual) learning.

EDUCATION

2025 - present	Master (System Engineering) at **University of Pennsylvania**	(GPA: 3.43/4.0)
2021 - 2024	Bachelor's Degree at **University of Rochester**	(GPA: 3.7/4.0)

RESEARCH EXPERIENCE

Research Assistant   Aug. 2024 - Dec. 2024

– Improved rehearsal sampling method (GRASP) for continual learning scenarios.
– Integrated and benchmarking various SOTA continual learning models (SIESTA, DERpp, GDumb).

WORK EXPERIENCE

ECCOM (MLE intern)   May 2024 - Aug. 2024

– Developed and evaluated models for feature selection and importance analysis based on client requirements.
– Implemented tabular data classification using XGBoost, CatBoost, TabNet.
– Designed end-to-end workflow orchestration for employee turnover prediction with 90%+ accuracy on blind test set.

Red Note (business intelligence intern)   May 2023 - Aug. 2023

– Web scraped rival e-commerce platform's sale performance
– Developed a LSTM model for consumer interest prediction

TEACHING EXPERIENCE

Recitation Teaching Assistant (Computer Models and Limitations)	Jan. 2025 - May 2025
Workshop Teaching Assistant (Intro to Programming)	Aug. 2024 - Dec. 2024
Class Teaching Assistant(Computational Statistics)	Aug. 2023 - May. 2024

– Lead weekly workshop sessions and provide 1-1 assistance in R and Python
– Grade assignments and exams

PROJECTS

Survey on LLM Fine-tuning with LoRA Variants

– Compared performances of various LoRA-based fine-tuning approaches (LoRA-FA, AdaLoRA, VeRa, etc.) on Llama3-8b.
– Created benchmarking pipeline (LLM-based evaluation) to assess efficiency and model performance trade-offs.

SKILLS

Machine Learning	PyTorch, Scikit-learn, Pandas, Numpy
Data Science	Data preprocessing, feature engineering, model development, evaluation, visualization.