Zeyu Yang

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Research Interests

Large Scale Machine Learning; Generative Modeling

Education

Rice University August 2024 – Present
Ph.D. in Electrical and Computer Engineering, Advisor: Prof. Anshumali Shrivastava

Rice University August 2021 – May 2023
M.S. in Data Science, Advisor: Prof. Joe Warren and Prof. Akane Sano

University of Electronic Science and Technology of China August 2017 – May 2021
B.E. in Electronic Information Engineering

Skills & Certificates

Programming:

- *Data Science:* C++, CUDA, Python (PyTorch, Hugging Face, Matplotlib), MATLAB, Tableau
- *Web Development:* Python (Django, Dash), HTML, CSS, JavaScript (React), PostgreSQL
- *IT Skills:* Git, AWS, Docker, Linux, Markdown, LaTeX

Research Experience

Rice Rush Lab December 2024 – Present
Graduate Research Assistant, with Prof. Anshumali Shrivastava

- Developed an adaptive quantization framework with learnable functions, which enables data-driven grid learning and parameter-efficient training for large-scale models without low-rank adaptation [4].

Rice Computational Wellbeing Group January 2024 – July 2024
Graduate Student Researcher, with Prof. Akane Sano

- Developed a fair diffusion model to generate balanced mixed-type tabular data conditioned on multiple labels [1].
- Created a self-supervised multimodal learning method for stress detection using time series and tabular data [2].

Publications

Published Papers and Software:

1. **Zeyu Yang**, Han Yu, Peikun Guo, Khadija Zanna, Xiaoxue Yang, Akane Sano, "Balanced Mixed-Type Tabular Data Synthesis with Diffusion Models", *Transactions on Machine Learning Research (TMLR)*, 2025.
2. **Zeyu Yang**, Han Yu, Akane Sano, "Contrastive Pretraining for Stress Detection with Multimodal Wearable Sensor Data and Surveys", *Conference on Health, Inference, and Learning (CHIL)*, 2025.
3. *PlotNet*. (2022). [Online]. Available: https://github.com/zeyuyang8/plotnet

In Submission:

4. **Zeyu Yang**, Tianyi Zhang, Junda Su, Anshumali Shrivastava, "Adaptive Quantization with Learnable Functions", in submission to *Neural Information Processing Systems (NeurIPS)*, 2025.

Awards & Honors

Outstanding Undergraduate Student Award 2021
Meritorious Winner of Interdisciplinary Contest in Modeling 2020