

Yijing Zhang

RESEARCH INTERESTS	<i>Data-centric Machine Learning, NLP, Foundation Models, Data Efficiency, Robustness</i>	
CONTACT INFORMATION	<i>E-mail:</i> yzhang2637@wisc.edu <i>Website:</i> https://yijingz02.github.io/	
EDUCATION	B.S. in Computer Science University of Wisconsin - Madison • with Honor in the Major, Computer Science	Sep 2021 - May 2024
PUBLICATIONS	Yijing Zhang , Frederic Sala. <i>Methods for Domain-specific Fine-tuning for Generative Models</i> . Senior honor thesis for Honors in the Major, L&S Honors Program at University of Wisconsin - Madison, 2024. [Paper]	
	Lin Zhang, Shentong Mo, Yijing Zhang , Pedro Morgado. <i>Audio-Guided Visual Animation</i> . Accepted for oral presentation by European Conference on Computer Vision(ECCV) 2024. [Paper] [Code]	
	Dyah Adila, Changho Shin, Yijing Zhang , Frederic Sala. <i>Can Language Models Safeguard Themselves, Instantly and For Free?</i> Accepted by International Conference on Machine Learning(ICML) 2024 Workshop on NextGenAISafety. [Paper]	
	Dyah Adila, Changho Shin, Yijing Zhang , Frederic Sala. <i>Is Free Self-Alignment Possible?</i> In submission to International Conference on Learning Representations(ICLR) 2025. [Paper]	
	Yijing Zhang , Dyah Adila, Changho Shin, Frederic Sala. <i>Personalize Your LLM: Fake it then Align it</i> . In submission to Annual Conference of the North American Chapter of the Association for Computational Linguistics(NAAACL) 2025. [Paper]	
	Lin Zhang, Yufan Zhou, Shentong Mo, Cheng-En Wu, Yibing Wei, Yijing Zhang , Jinhong Lin, Ruiyi Zhang, Tong Sun, Pedro Morgado. <i>OpenASVA: Open-world Audio-Synchronized Visual Animation with Increased Controllability</i> In process.	
AWARDS & HONORS	Honors in the Major, Computer Science. • Thesis: "Methods for Domain-specific Fine-tuning for Generative Model". • University of Wisconsin - Madison, College of Letters & Science, L&S Honors Program	May, 2024
	ACM ICPC 2021 NA Regional Contest: Team Rank 14. • Competitive programming since middle school. Multiple regional first prize for OI competitions.	2021
RESEARCH PROJECTS	On Generating Better Quality Instruction Tuning Data <i>@Brown University & University of Wisconsin - Madison</i> • Related Topic: NLP, Generative models. • Supervisor: Prof. Stephen Bach & Prof. Fred Sala. • Focus on generating better quality instruction tuning data from unannotated text.	Sep 2024 - Present
	CHAMELEON <i>@University of Wisconsin - Madison</i> • Related Topic: NLP, Alignment, Personalization. • Supervisor: Prof. Fred Sala. • Utilizing AlignEZ approach for large-scale, low-resource personalization for LLMs.	May 2024 - Present

- Planned submission to ICML 2025.

Audio-guided Animation

Mar 2023 - Present

@University of Wisconsin - Madison

- Related Topic: Computer vision, Generative models, Audio-to-Video.
- Supervisor: Prof. Pedro Morgado.
- Focused on generating audio-video highly synchronized animation with guidance on audio.
- Accepted as oral presentation by ECCV 2024.

AlignEZ

May 2024 - Sep 2024

@University of Wisconsin - Madison

- Related Topic: NLP, Alignment.
- Supervisor: Prof. Fred Sala.
- Focused on aligning pretrained language models without additional training.
- In submission to ICLR 2025.

Methods for Domain-specific Fine-tuning for Generative Model

Feb 2022 - May 2024

@University of Wisconsin - Madison

- Related Topics: NLP, Foundation models, Generative models, Fine-tuning, Data Efficiency
- Supervisor: Prof. Fred Sala.
- Served as independent research study for senior honor thesis.
- Focused on investigating the retrainability of synthetic datasets generated by fine-tuned generative models for domain-specific downstream classification tasks and the fine-tuning efficiency for generating higher-quality synthetic datasets.

EXPERIENCE

University of Wisconsin-Madison, USA

Sep 2024 - Present

Research Assistant

- Work as research assistant for Prof. Fred Sala.
- Collaborate with Prof. Stephen Bach from Brown University, we focus on synthetic instruction tuning data generation from unannotated data.

University of Wisconsin-Madison, USA

Jan 2022 - May 2024

Peer Mentor

- Peer Mentor for the course CS400.
- Responsibilities include: Holding drop-in office hours, and answering online questions.
- Wrote a course reference document aimed at enhancing students' comprehension of course materials. The content includes topics such as Java interface design, generics, iterators, etc.

TECHNICAL SKILLS

- **Machine Learning:** Generative models, NLP, Foundation model, GPTs and Computer vision.
- **Math:** Probability, Statistics, Linear Algebra, Analysis.
- **Research Tools:** Pytorch, TensorFlow, MATLAB, etc.
- **Research Skills:** Experiment design, Data collection, Data analysis, Essay writing etc.
- **Programming languages:** Python (Max length of code for single past project 1500+ lines), Java (~400 lines), C (~800 lines), C++ (~300 lines).
- **Developer skills:** Web Development, Front-end, and Back-end Development