

# Amber Yijia Zheng

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## Education

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### Purdue University

*Doctor of Philosophy in Computer Science*

Advisor: Raymond A. Yeh

Indiana, IN

2022–present

### Shanghai University of Finance and Economics

*Bachelor of Science in Data Science*

Major GPA – 3.9/4.0, Ranking – 1/41

Advisor: Yixuan Qiu

Shanghai, China

2018–2022

## Publications

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- [1] **Amber Yijia Zheng**, Tong He, Yixuan Qiu, Minjie Wang, and David P Wipf. Graph machine learning through the lens of bilevel optimization. *Artificial Intelligence and Statistics (AISTATS)*, 2024.
- [2] **Amber Yijia Zheng** and Raymond A. Yeh. Imma: Immunizing text-to-image models against malicious adaptation, 2023.
- [3] **Amber Yijia Zheng**, Tong He, Yixuan Qiu, and David P Wipf. Learning manifold dimensions with conditional variational autoencoders. *Advances in Neural Information Processing Systems*, 35, 2022.

## Research & Work Experience

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### Purdue University — Department of Computer Science

*Research Assistant*

West Lafayette, IN

2023–present

- Researched algorithms in protecting stable diffusion from malicious adaptation.
- Researched erasing concepts from generative AI via influence functions.

### Amazon Web Service

*Applied Scientist Intern*

Mentor: David P. Wipf, Tong He

Shanghai, China

2022–2023

- Researched deep generative model on manifold data.
- Investigated graph machine learning from a bilevel optimization perspective.

### Kafang Tech

*Quantitative Research Intern*

Shanghai, China

Fall 2021

- Researched deep-learning-based trading strategy on high-frequency trading data.

### Shanghai University of Finance and Economics

*Research Assistant*

Shanghai, China

2019–2021

- Researched deep generative models and proposed a mutual-information-based lower bound that provides more interpretability than a variational lower bound. (2021)
- Researched and proposed discriminator-driven energy-based latent space model. (2020 - 2021)
- Researched Kaplan-Meier precedence test based on ranked set progressively type-II censored data. (2020)
- Investigated residuals of SVM prediction on time series data. (2019)

**Shanghai Jiao Tong University — John Hopcroft Center for Computer Science** Shanghai, China  
*Research Assistant* Fall 2020

- Researched overfitting in image classification via entropy theory.

**Ping An** Shanghai, China  
*Algorithm Engineering Intern* Summer 2020

- Worked on the NER model in optimizing the labeled corpus of legal documents.

## Teaching Experience

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**Purdue University** West Lafayette, IN  
*Teaching Assistant - STAT 350: Introduction To Statistics* Spring 2023

**Purdue University** West Lafayette, IN  
*Teaching Assistant - STAT 511: Statistical Methods* Fall 2022

## Honors & Awards

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**NeurIPS Travel Award** 2022

- Awarded to support the travel of graduate students and post-doctoral fellows and junior faculty to attend NeurIPS 2022.

**Shanghai Outstanding Graduate** 2022

- Recognized as an Outstanding Graduate by the Shanghai Municipal Government for academic excellence.

**First-class People's Scholarship** 2020, 2021, 2022

- Awarded to top 2% students in academic in the department.

## Talks

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**Learning Manifold Dimensions with Conditional Variational Autoencoders** ([link](#))

- Invited speaker for Rising Star Lecture Series in Center for Frontier AI Research – Singapore 2023

## Academic Services

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**Conference Reviewer:** Neural Information Processing Systems (NeurIPS)

**Conference Reviewer:** International Conference on Learning Representations (ICLR)

**Conference Reviewer:** Computer Vision and Pattern Recognition (CVPR)

## References

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**Raymond A. Yeh, Assistant Professor**  
 Department of Computer Science

Purdue University  
rayyeh@purdue.edu

**Yixuan Qiu, Associate Professor**  
School of Statistics and Management  
Shanghai University of Finance and Economics  
qiuyixuan@sufe.edu.cn

**David Wipf, Principle Research Scientist**  
Amazon Web Service  
Amazon, Inc  
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