

## EDUCATION

### UNIVERSITY OF TEXAS AT AUSTIN

Ph.D. Electrical and Computer Engineering

2023 to Present

Advisor: Dr. Amy Zhang

**Research Areas:** diffusion models, text-to-image model evaluation, multi-modal language models, uncertainty quantification in deep learning

### UNIVERSITY OF UTAH

B.S. Computer Science, Minors in Math and Cognitive Science

2016 to 2020

Graduated Cum Laude, Recipient of the President's Scholarship, Regents' Scholarship

## RESEARCH & PROFESSIONAL EXPERIENCE

### RESEARCH SCIENTIST INTERN – META AI Research (FAIR)

June – Nov 2024

Developed a text-to-image (T2I) model evaluation method that uses multi-modal large language models (LLMs) as evaluator agents that generate image prompts and judge generated images.

Our method's T2I model rankings match existing benchmark's rankings while using 80x less prompts and achieves higher correlations with human judgments.

### SOFTWARE ENGINEER – META

Gen AI: AI Generated Stickers

Dec 2022 - July 2023

Developed pipelines and metrics for evaluating text-to-image models used for AI Generated Stickers in Messenger and WhatsApp.

Implemented prompt engineering that enabled image generation quality to reach production standards.

### Bayesian Modeling at Meta Research

July – Nov 2022

Bayesian modeling, with our own [probabilistic programming language](#).

Implemented Bayesian optional stopping in Meta's A/B tests, to preemptively stop experiments that would result in metric regression, saving revenue and resources.

### Probabilistic Neural Networks At Meta Research

June 2020 - July 2022

Benchmarked and applied uncertainty quantification methods for deep learning in ranking, anti-scraping, and computer vision models in Meta products. Focused on failure prevention and signaling in out-of-distribution and adversarial data settings.

## PUBLICATIONS

**Jiahui Chen\***, Candace Ross, Reyhane Askari-Hemmat, Koustuv Sinha, Melissa Hall, Michal Drozdal, Adriana Romero-Soriano. "Multi-Modal Language Models as Text-to-Image Model Evaluators". Under Review, CVPR 2025

Animesh Sinha\*, Bo Sun\*, Anmol Kalia\*, Arantxa Casanova\*, **Jiahui Chen**, et al.

"Text-to-Sticker: Style Tailoring Latent Diffusion Models for Human Expression". ECCV 2024

Hang Wang\*, Sahar Karami, **Jiahui Chen**, et al. "Training Set Cleansing of Backdoor Poisoning By Self-supervised Representation Learning". IEEE ICASSP 2023

Li Chen, **Karen Chen**, Purvi Goel, Ilknur Kaynar Kabul. "Augment Your Deterministic Model with Monte Carlo Dropout to Combat Noisy Labels". Poster in [WiML Workshop 2021](#)

**Jiahui Chen\***, Joe Breen , Jeff M. Phillips, Jacobus Van der Merwe. *“Practical and Configurable Network Traffic Classification Using Probabilistic Machine Learning”*. Springer Cluster Computing Volume 25 Issue 4

Joe Breen, Lincoln Bryant,, **Jiahui Chen**, et al. *“Managing privilege and Access on Federated Edge Platforms”*. *Proceedings of the Practice and Experience in Advanced Research Computing on Rise of the Machines (Learning)*, PEARC’19

Joe Breen, Lincoln Bryant, **Jiahui Chen**, et al. *“Developing Edge Services for Federated Infrastructure Using MiniSLATE”*. *Proceedings of the Practice and Experience in Advanced Research Computing on Rise of the Machines (Learning)*, PEARC ’19

Joe Breen, Lincoln Bryant, Gabriele Carcassi, **Jiahui Chen**, et al. *“Building the SLATE Platform”*. In *Proceedings of the Practice and Experience on Advanced Research Computing*, PEARC ’18

## AWARDS & HONORS

National Science Foundation Computer and Information Science and Engineering Graduate Fellowship (CSGrad4US), 2022

Cockrell School of Engineering Multi-Year Fellowship, 2023

## VOLUNTEERING & LEADERSHIP

### **Coding Course TA – Code Tenderloin**

**2020 to 2022** – Teaching Assistant for free introductory JavaScript courses provided by a non-profit that serves the Tenderloin community of San Francisco.

### **Section Leader – Code In Place**

**2021** – Teaching team member for a 6-week online programming course offered by Stanford University. Over 12,000 students from around the world participated.

**Undergraduate Student Advisory Committee – School of Computing, University of Utah**  
**2018 to 2020** - Faculty review and student event organization.

### **Student Ambassador – College of Engineering, University of Utah**

**November 2016 to May 2020** - Tours, outreach, and presentations leader.

### **AmeriCorps Service Term**

**December 2016 to August 2017** - 300 hour service term for a community health nonprofit.