HAOZHE (TONY) CHEN

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EDUCATION

Columbia University, Columbia Engineering

Aug 2021 - May 2025

- B.S., Computer Science, GPA: 4.05/4

RESEARCH EXPERIENCE

Decision, Risk, and Operations Division, Columbia Business School Research Intern Apr 2023 - Present

- Researched principled frameworks for understanding LLM pretraining data mixture
- Researched simulation frameworks for queueing networks and foundation model serving
- Researched simulating human behaviors with Large Language Model
- Advisor: Hongseok Namkoong, Tianyi Peng

Computer Vision Lab, Columbia University Research Intern

Sep 2022 - Present

- Researched robustness and interpretability of vision and language models
- Researched adaptive evaluation of foundaton models
- Researched model architectures with flexible inference-time compute scaling
- Advisor: Carl Vondrick, Chengzhi Mao

Spoken Language Processing Group, Columbia University Research Intern

Nov 2021 - Present

- Researched controllable synthesis of emotional speech
- Built datasets for empathetic speech and conducted acoustic-lexical analysis
- Advisor: Julia Hirschberg

Sen Lab, UC Santa Barbara Research Intern

June 2020 - Aug 2020

- Researched 3D object reconstruction model with VAE and 3D-GAN

TEACHING EXPERIENCE

Columbia Business School Teaching Assistant

July 2024 - Present

- B9153 Generative AI: Technical and Social (PhD Course). Instructor: Tianyi Peng, Hannah Li.
- Assisted course material development on building and training Large Language Model.

Columbia University Teaching Assistant

Jan 2023 - May 2023

- COMS 3261 Computer Science Theory. Instructor: Xi Chen.
- Held office hours, graded homeworks & exams.

SERVICE

Reviewer

- NeurIPS 2024
- ICLR 2025
- AISTATS 2025

INDUSTRY EXPERIENCE

Together AI Research Intern

Sep 2024 - Present

- Researched LLM model routing and approximate speculative decoding

Voloridge Investment Management Quantitative Research Intern

Sep 2023 - Dec 2023

- Researched equity factor modeling with neural network

Voloridge Investment Management Quantitative Research Intern

May 2023 - Aug 2023

- Researched predicting stock return with large-scale natural language datasets
- Modeled earning call transcripts and price movements with Large Language Models, clustering, and regression
- Designed procedure to predict commodity price movement with equity transcript data via prompting

Voloridge Investment Management Quantitative Research Intern

June 2021 - Aug 2021

- Researched stock market clustering based on price history and corporation relations using graph neural network
- Produced stock groupings with improved intra-group correlations and adaptability to market changes

PUBLICATIONS

Haozhe Chen*, Ang Li*, Ethan Che, Jing Dong, Tianyi Peng, Hongseok Namkoong. "QGym: Scalable Simulation and Benchmarking of Queuing Network Controllers." *NeurIPS 2024*.

Haozhe Chen, Run Chen, Julia Hirschberg. "EmoKnob: Enhance Voice Cloning with Fine-Grained Emotion Control." *EMNLP 2024*.

Haozhe Chen, Carl Vondrick, Chengzhi Mao. "SelfIE: Self-Interpretation of Large Language Model Embeddings." *ICML 2024*.

Haozhe Chen, Junfeng Yang, Carl Vondrick, Chengzhi Mao. "INViTE: INterpret and Control Vision Transformer with Text Explanations." *ICLR 2024*.

Run Chen, **Haozhe Chen**, Anushka Kulkarni, Eleanor Lin, Linda Pang, Divya Tadimeti, Julia Hirschberg. "Detecting Empathy in Speech." *INTERSPEECH 2024*.

HONORS AND AWARDS

Kaggle Competition Expert (#144 of 160,000+)

2020

- Designed & trained models in natural language processing & computer vision in 20+ Kaggle competitions. Peak rank #144 out of 160,000+ users (top 0.1%)
- Won 7 silver medals and 9 bronze medals. Details available on Kaggle profile: kaggle.com/tonychenxyz

MCM Modeling Contest Meritorious Award (6% of 13753)

2020

- Designed a regression-based model and constructed 2000+ lines of simulation to predict ocean temperature changes and impacts on fish migration; produced a 26-page paper

SKILLS AND INTERESTS

Programming Languages: Python, CUDA, Java, MATLAB, C, HTML, JavaScript, CSS

Libraries: PyTorch, TensorFlow, Keras, scikit-learn, LightGBM, Pandas, NumPy

Interests: photography, cooking, creative writing, GeoGuessr