

CHENGHAO QIU

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EDUCATION

Texas A&M University

PhD @ Computer Science | GPA: 4.0 / 4.0

College Station, TX

Aug 2025 - Jun 2030 (Expected)

Tianjin University

Bachelor @ Computer Science | GPA: 3.75 / 4.0

Tianjin, China

Sep 2021 - Jun 2025

SKILLS AND INTERESTS

| | |
|-------------------|--|
| Program Language | Python SQL C++ |
| ML Framework | PyTorch Huggingface |
| Tools & Liberties | Git Transformers Scikit-learn Pandas Numpy |

RESEARCH EXPERIENCE

ZHOU LAB, Texas A&M University

Graduate Research Assistant, with Prof. Yi Zhou

Aug 2025 - present

- Investigating the interpretability of **In-Context Learning (ICL)** by proposing a novel adversarial attack framework that perturbs context demonstrations to induce targeted misjudgments, facilitating a deeper understanding of how Large Language Models utilize contextual information for inference.
- Developing an **analog-circuit-friendly CNN architecture** capable of directly processing noisy RAW RGGB data, and introducing a specialized robustness-aware training scheme that effectively mitigates hardware non-idealities, specifically mismatch drift and noise, for efficient edge computing.

MAGICS LAB, Northwestern University

Undergraduate Research Assistant, with Prof. Han Liu

Apr 2024 - July 2025

- Proposed **GERM**, a fast and low-cost genomic foundation model for resource-constrained settings, by replacing standard attention with an outlier-free mechanism, improving fine-tuning performance by **37.98%** and quantization robustness by **64.34%** over the baseline.
- Developed the **GenoArmory** framework, the first unified benchmark for systematically evaluating the adversarial robustness of Genomic Foundation Models (GFMs), and introduced the **GenoAdv** dataset, achieving a **34.71%** increase in Defense Success Rate when used in training.

SELECTED PAPER

- [1] Haozheng Luo*, **Chenghao Qiu***, Maojiang Su, Zhihan Zhou, Zoe Mehta, Guo Ye, Jerry Yao-Chieh Hu, Han Liu. Fast and Low-Cost Genomic Foundation Models via Outlier Removal. Forty-Second International Conference on Machine Learning (ICML 2025). [link](#)

MANUSCRIPT IN PREPARATION

- [1] Haozheng Luo*, **Chenghao Qiu***, Yimin Wang, Shang Wu, Jiahao Yu, Han Liu, Binghui Wang, Yan Chen. GenoArmory: A Unified Evaluation Framework for Adversarial Attacks on Genomic Foundation Models. Manuscript in preparation for submission to ICLR 2026.

*denotes equal contribution