Yanshuo Chen

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Education

University of Maryland, College Park, USA — Aug. 2023 – Present
Ph.D. in Computer Science. Advisor: Heng Huang.

Tsinghua University, Beijing, China — Aug. 2018 – Jun. 2022
B.S. in Biological Science.

Research Interests

AI for biology: Generative modeling for virtual cells, mRNA design, and protein design.

Efficient machine learning: Mixed-precision post-training quantization, quantization-aware training, and pruning for language and multimodal models.

Industry Experience

Research Intern, Adobe Research — May – Aug. 2026
Efficient Multi-Agent Workflow.

Service & Honors

Outstanding Reviewer, CVPR — 2026
Gold Reviewer, ICML — 2026
Gold Medal, China National Biology Olympiad — Aug. 2017

Selected Publications

* Equal contribution.

CloneOT: predicting clone-specific perturbation responses with lineage-supervised neural inverse optimal transport
Yanshuo Chen, Wei Chen, and Heng Huang.
arXiv preprint, October 2026. [paper] [code] [docs]

MPQ: A Message-Passing View of Post-Training Quantization
Yanshuo Chen, Chenxi Liu, Reza Shirkavand, and Heng Huang.
NeurIPS 2026. Accepted as a poster. [paper] [code]

Grounding Multimodal Reasoning with Evidence-Ablated Negatives
Chenxi Liu, Tianyi Xiong, **Yanshuo Chen**, and Heng Huang.
NeurIPS 2026. Accepted as a poster.

Multi-Crit: Benchmarking Multimodal Judges on Pluralistic Criteria-Following
Tianyi Xiong, Yi Ge, Ming Li, Zuolong Zhang, Pranav Kulkarni, Kaishen Wang, Qi He, Zeying Zhu, Chenxi Liu, Ruibo Chen, Tong Zheng, **Yanshuo Chen**, Xiyao Wang, Renrui Zhang, Wenhu Chen, and Heng Huang.
CVPR 2026, Highlight. [paper] [project] [code]

Learning from Self-Debate: Preparing Reasoning Models for Multi-Agent Debate
Chenxi Liu, **Yanshuo Chen**, Ruibo Chen, Tianyi Xiong, Tong Zheng, and Heng Huang.
arXiv preprint, 2026. [paper] [code]

A Watermark for Order-Agnostic Language Models
Ruibo Chen*, Yihan Wu*, **Yanshuo Chen**, Chenxi Liu, Junfeng Guo, and Heng Huang.
ICLR 2025. [paper] [arXiv]

CodonTranslator: A Conditional Codon Language Model for Codon Optimization Across Life Domains
Yanshuo Chen*, Yuming Zhang*, Joshua Li, Boxue Tian, and Heng Huang.
bioRxiv preprint, 2025. [paper] [code] [model]

Fast and Scalable Wasserstein-1 Neural Optimal Transport Solver for Single-Cell Perturbation Prediction
Yanshuo Chen, Zhengmian Hu, Wei Chen, and Heng Huang.
Bioinformatics; ISMB/ECCB 2025. [paper] [arXiv] [code]

Enhancing Privacy in Biosecurity with Watermarked Protein Design
Yanshuo Chen*, Zhengmian Hu*, Yihan Wu, Ruibo Chen, Yongrui Jin, Marcus Zhan, Chengjin Xie, Wei Chen, and Heng Huang.
Bioinformatics, 41(7), btaf141, 2025. [paper] [code]

Deep Autoencoder for Interpretable Tissue-Adaptive Deconvolution and Cell-Type-Specific Gene Analysis
Yanshuo Chen*, Yixuan Wang*, Yuelong Chen, Yuqi Cheng, Yumeng Wei, Yunxiang Li, Jiuming Wang, Yingying Wei, Ting-Fung Chan, and Yu Li.
Nature Communications, 13, 6735, 2022. [paper] [code] [docs]