

Shenghao Zhu

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[Google Scholar](#) | [GitHub](#)

EDUCATION

Hangzhou Dianzi University

Bachelor of Computer Science in Computer Science and Technology

Hangzhou, China

Sep. 2022 – May 2026

HONORS & AWARDS

- Zhejiang Provincial Government Scholarship (2024, 2025).
- Science and Technology Innovation Star.
- National First Prize, China College Students' Service Outsourcing Innovation and Entrepreneurship Competition, Enterprise Proposition Category.

EXPERIENCE

Medical Multi-turn Dialogue

Medical AI Research Intern, Ant Group

Dr. Le Lu

March 2026 – July 2026

- Conducted research on **longitudinal treatment-response analysis** for **lung-cancer brain metastasis**, integrating serial brain MRI lesion segmentation with lesion-trajectory modeling to characterize tumor-burden changes and support treatment-response assessment and drug-efficacy prediction.
- Working on medical multi-turn dialogue with an **autoregressive gap** formulation that models cross-turn reasoning gaps and dialogue-state evolution for clinically grounded response generation.

Missing Modality Training Strategy

Visiting Student, Medical Artificial Intelligence Lab, Westlake University

Prof. Yefeng Zheng

August 2025 – March 2026

- **ReBorn** develops Missing-Modality Pareto Training, Model Split Weight Moving Training, and Gradient Entropy Balanced Optimization to convert full-modality segmentation models into robust missing-modality survivors. (**CVPR 2026 Findings, First author, transferred**)

Knowledge Distillation, Unsupervised Large Models

Online Research Intern, BIRTH Lab, Tsinghua University

Prof. Qiyuan Tian

June 2024 – August 2025

- Designed and implemented a student model in a knowledge-distillation framework by integrating lightweight adapter modules to gracefully handle missing input modalities, consolidating separate modality-specific networks into one unified model and achieving substantial reductions in parameter count and inference latency. **AdaMM (Medical Image Analysis, accepted, First author)**
- A Multi-Scale Transformer KD aligns attention across scales for cross-modal feature extraction, Dual-Mode Logit Distillation merges MSE and KL divergence for adaptive teacher-student transfer, and Global Style Matching integrates adversarial learning with MSE to harmonize feature styles under missing modalities. **MST-KDNet (MICCAI 2025, First author)**

Missing Modality, Multimodal Fusion

Research Intern, SRIBD Lab, CUHK-Shenzhen and 3DV Lab, HDU

Prof. Chaomiao Wang, Prof. Feiwei Qin

August 2023 – June 2024

- A self-attention variational encoder is used to fuse MRI modalities into a shared latent prior, a Vision XLSTM Attention module is used to capture spatial-temporal dependencies, and finally, a Squeeze-Fusion-Excitation module is used to recalibrate and merge multimodal features. **XLSTM-HVED (ISBI Oral First author)**
- A 3D GAN-ViT extractor synthesizes PET from MRI, a Multimodal Mamba Classifier fuses MRI/PET with clinical data to predict MCI-to-AD conversion, and pixel-level bi-cross attention refines their interactions. **GFE-Mamba (Information Fusion, Co-first author under review)**
- Kansformer's Kolmogorov-Arnold Network supplies nonlinear priors for SCConv's spatial and channel reconstruction, and Global-Local Attention balances global context and local detail via depth-separable convolutions with multi-head self-attention. **SCKansformer (IEEE Journal of Biomedical and Health Informatics, cited by KAN 2.0, Second author)**
- A feature tagger unifies clinical, cognitive, and demographic data into modality-aware embeddings, TimesBlock extracts multi-scale EEG periodic features, and Cross-modal Attention Aggregation uses DenseBlock-processed MRI cues to resolve inter-modal inconsistencies. **MSTNet (ICASSP, Second author)**

PUBLICATION

- **Google Scholar:** 180 citations, h-index 6, i10-index 6.
- **Shenghao Z**, Yifei C, Weihong C, ... & Qiyuan Tian*. “No Modality Left Behind: Adapting to Missing Modalities via Knowledge Distillation for Brain Tumor Segmentation” **Medical Image Analysis**, accepted, **First author**
GitHub: <https://github.com/Quanato607/AdaMM>, **GitHub Stars:** 24, **Google Citations:** 5
- **Shenghao Z**, Yifei C, Weihong C, ... & Feiwei Q*. “Bridging the Gap in Missing Modalities: Leveraging Knowledge Distillation and Style Matching for Brain Tumor Segmentation” **MICCAI**, 2025
GitHub: <https://github.com/Quanato607/MST-KDNet>, **GitHub Stars:** 21, **Google Citations:** 12
- **Shenghao Z**, Yifei C, Weihong C, ... & Yefeng Zheng*. “ReBorn: Turning Full-Modality Segmentation Models into Missing-Modality Survivors” **CVPR 2026 Findings**, transferred
- **Shenghao Z**, Yifei C, Shuo J, Weihong C, ... & Zhu Z*. “XLSTM-HVED: Cross-Modal Brain Tumor Segmentation and MRI Reconstruction Method Using Vision XLSTM and Heteromodal Variational Encoder-Decoder” **IEEE ISBI**, 2025, **Oral Presentation**
GitHub: <https://github.com/Quanato607/XLSTM-HVED>, **GitHub Stars:** 18, **Google Citations:** 14
- Yifei C[†], Zhu Z^{†*}, **Shenghao Z**, ... & Yu G. “Sckansformer: Fine-grained classification of bone marrow cells via kansformer backbone and hierarchical attention mechanisms” **IEEE Journal of Biomedical and Health Informatics**, **Top 1% high citation**
GitHub: <https://github.com/Justlfc03/SCKansformer>, **GitHub Stars:** 49, **Google Citations:** 87
- Yifei C, **Shenghao Z**, Zhaojie F, ... & Changmiao W. “Toward Robust Early Detection of Alzheimer’s Disease via an Integrated Multimodal Learning Approach” **IEEE ICASSP**, 2025
GitHub: <https://github.com/Justlfc03/MSTNet>, **GitHub Stars:** 69, **Google Citations:** 27
- Zhaojie F[†], **Shenghao Z**[†], Yifei C[†], ... & Hu Z. “GFE-Mamba: Mamba-based AD Multi-modal Progression Assessment via Generative Feature Extraction from MCI” **Information Fusion**, under review
GitHub: <https://github.com/Tinysqua/GFE-Mamba>, **GitHub Stars:** 31, **Google Citations:** 15
- Ruiquan G, Xiao Y, Yifei C, Fan J, **Shenghao Z**, ... & Shanzhou N. “TC-KANRecon: High-Quality and Accelerated MRI Reconstruction via Adaptive KAN Mechanisms and Intelligent Feature Scaling” **IEEE Journal of Biomedical and Health Informatics**, **Google Citations:** 17

COMPETITION & PROJECT EXPERIENCE & PATENTS.

Competition

- 2024: China, College Students’ Service Outsourcing Innovation and Entrepreneurship, Competition, Enterprise Proposition Category - National First Prize.
- 2024: China, Eastern Region, College Students’ Service Outsourcing Improvement and Entrepreneurship Competition, Enterprise Proposition Category - Regional First Prize.
- 2024: Chinese Collegiate Computing Competition, BigData Practice Track - National Second Prize.
- 2024 China International College Student’s Innovation Competition - National Bronze Award.

Projects

- 2024 National Undergraduate Innovation and Entrepreneurship Training Program (Project Lead), 2024 Zhejiang Provincial Undergraduate Scientific and Technological Innovation Activities Program (Project Lead).

Patents

- 7 Publicly Available National Invention Patents (3 as First Author); 1 Authorized Computer Software Copyrights.

PROFESSIONAL SERVICE

Reviewer

- IEEE Journal of Biomedical and Health Informatics, IEEE Transactions on Intelligent Transportation Systems

TECHNICAL SKILLS

Medical AI & Algorithms: Missing-modality segmentation, multimodal fusion, knowledge distillation, LLM-based medical multi-turn dialogue, autoregressive gap modeling, and computer vision.

Tools & Systems: PyTorch, OpenCV, SGLang, vLLM, Linux, Selenium, LaTeX, Spring Boot, Flask, MySQL, Redis, Neo4j, Nginx, Celery, RabbitMQ, and Elasticsearch.