Yuci Liang（梁宇赐）

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SHENZHEN UNIVERSITY
深圳大学

EDUCATION

Shenzhen University   Sep 2023 - Present

M.E. in Computer Science and Technology   Shenzhen, Guangdong,China

(Admitted without the entrance examination, supervised by Prof. Song Wu and Prof. Linlin Shen)

Wuyi University   Sep 2019 - Jun 2023

B.E. in Computer Communication Network   Jiangmen, Guangdong,China

RESEARCH INTERESTS

Multimodal Large Language Models; Multi-Agent Systems; Preference Training; Reinforcement Learning from Human Feedback; Digital Pathology Analysis; Medical Imaging Analysis; Knowledge Graph

CONFERENCE PUBLICATIONS

1. WSI-LLaVA: A Multimodal Large Language Model for Whole Slide Image

Yuci Liang, Xinheng LYU, Meidan Ding, Wenting Chen, Xiaohan Xing, Jipeng Zhang, Xiangjian He, Song Wu, Sen Yang, Xiyue Wang, Linlin Shen

ICCV 2025 *(International Conference on Computer Vision)*

(Top-tier conference in computer vision; CCF A) (paper link)

2. WSI-Agents: A Collaborative Multi-Agent System for Multi-Modal Whole Slide Image

*Xinheng Lyu, **Yuci Liang** , Wenting Chen, Meidan Ding, Jiaqi Yang, Huang Guolin, Daokun Zhang, Xiangjian He, Linlin Shen*
MICCAI 2025 *(International Conference on Medical Image Computing and Computer Assisted Intervention)*
(Early Accept; acceptance rate: 9%; Leading conference in medical image computing; CCF B) (paper link)

PROJECT EXPERIENCE

WSI-LLaVA: A Multimodal Large Language Model for Whole Slide Image

- Constructed WSI-Bench, the first large-scale morphology-aware benchmark with 180k VQA pairs from 9,850 WSIs across 30 cancer types, enabling systematic evaluation of MLLMs in pathology.
- Developed WSI-LLaVA, a multimodal large language model tailored for pathology image (WSI) analysis, enabling intelligent understanding and processing of digital pathology tasks such as diagnostic Q&A and report generation. (project link)

WSI-Agents: A Collaborative Multi-Agent System for Multi-Modal Whole Slide Image

- Proposed WSI-Agents, a novel collaborative multi-agent system for multi-modal WSI analysis, integrating expert agents, task allocation, consistency verification, and visual summarization modules to improve accuracy and versatility across pathology tasks. (project link)

WSI Pathology Report Generation Based on Transformer

- Independently developed a Transformer-based multimodal pathology report generation framework, integrating CLAM for WSI feature extraction and BioClinicalBERT for clinical text processing. Utilized a Seq2Seq architecture for cross-modal feature fusion and automatic report generation, significantly improving report accuracy and fluency to support diagnostic assistance and clinical decision-making.

Prostate tissue pathology image generation based on StyleGAN2

- Generated high-quality 1024×1024-pixel prostate histology tile images using StyleGAN2 as a data augmentation strategy for Gleason Grading classification tasks. Validated across multiple deep learning models, this approach effectively improved model accuracy and robustness.

Intelligent Tumor Annotation for Thyroid Ultrasound

- Collaborated with clinicians to construct a high-quality training dataset for thyroid ultrasound tumor annotation through frame extraction and precise labeling using LabelMe. Additionally, contributed to the development of a semi-automatic annotation pipeline based on x-anylabeling to improve annotation efficiency and consistency.

AI Programming Battle Game

- Independently developed an AI battle system based on the classic Snake game, innovatively introducing a programmable Bot module that allows users to write and deploy personalized strategy code for battles. The system includes a replay feature to facilitate review and learning, enhancing interactivity and practicality in programming education.

Online Chat System Based on SSM

- Independently developed the project using a three-tier backend architecture built with Spring, SpringMVC, and MyBatis. Implemented real-time message communication between frontend and backend via WebSocket. Followed software engineering best practices by writing development documentation, conducting feasibility analysis, and completing system design to ensure functionality and scalability.

SKILLS LIST

- Proficient in multimodal fusion techniques, capable of efficiently integrating medical imaging and clinical text to achieve cross-modal information interaction and joint reasoning.

- Familiar with large model training and fine-tuning workflows, with hands-on experience developing multimodal models using open-source frameworks such as LLaMA-Factory and Xtuner.

- Skilled in leveraging large model APIs and prompt engineering to construct medical visual question answering (VQA) tasks, capable of converting real medical data into multimodal task formats.

- Experienced in digital pathology image (WSI) processing workflows, including image processing, feature extraction, and representation learning; proficient with mainstream tools such as CLAM and TRIDENT for efficient feature construction.

- Proficient in designing, training, and deploying deep learning models using the PyTorch framework.

- Strong programming foundation with mastery of mainstream languages including Python and Java.

HONORS & AWARDS

Shenzhen University Graduate Freshman Special Award

Wuyi University University-Level Outstanding Graduate Student

Lanqiao Cup Provincial Competition — Second Prize, Java B Group

Wuyi University Outstanding Three-Good Student and Excellent Student Cadre