Haoyu Wu

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EDUCATION

Renmin University of China   **Beijing, China**
Bachelor of Spanish, Minor in Computer Science   *09 2021 - 06 2025*

The Hong Kong University of Science and Technology   **Hong Kong, China**
Research Intern at CSE. Supervisor: Prof. Qifeng CHEN   *07 2024 - 01 2025*

Courses with distinctions: Introduction to Computer System I(95),Advanced Algebra II(90), Calculus(90)
Teacher Assistant: Introduction to Computer System I(ICS I)
Technical Skills: Python; C/C++; Torch; Pytorch Lightning; DeepSpeed; Git

INTERNSHIPS

- **MSRA, ML Group, Advisor: Dr.Junliang Guo** Research About Video Generation and Embodied AI.

RESEARCH INTERESTS

- **Topics**: Visual Content Generation; 3D Digital Human
- **Methods**: Generative Models; Multimodal Large Models
- **Training Strategy**: RLHF; Training-free Methods; PEFT

PUBLICATION & UNDER REVIEW

EmoTalk: Speech-Driven Emotional Disentanglement for 3D Face Animation   **ICCV23**
*Ziqiao Peng, **Haoyu Wu**, et.al*   *DBIIR Lab, RUC*

- Followed the latest research on talking head generation, designed a content and emotion disentanglement module, and reproduced state-of-the-art models for comparative experiments.

VGG-Tex: Vivid Geometry-Guided 3D Facial Texture Estimation and Reconstruction   **Under review**
***Haoyu Wu**, Ziqiao Peng, et.al*   *DBIIR Lab,RUC*

- Conducted research on 3D head reconstruction, utilizing the implicit relationship between geometry and texture for realistic reconstruction and achieving high-quality facial texture estimation.

CoheDancers: Group Dance Generation by Music-Driven Coherence Decomposition   **Under review**
*Kaixing Yang, Xulong Tang, **Haoyu Wu**, et.al*   *DBIIR Lab,RUC*

RESEARCH EXPERIENCE

Diffusion-based Storytelling   **GSAI, Renmin University of China**
Led by Prof. Bing Su and Prof. Chongxuan Li   *03 2023 - 03 2024*

- Led the development of a text-driven sequence diffusion model for story visualization incorporating sequence information and character enhancement.

Video Generation   **CSE, HKUST**
Led by Prof. Qifeng Chen   *03 2024 - Present*

- **VideoDPO**: Omni-Preference Alignment for Video Diffusion Generation.(In Submission)
- **VideoTuna**:A open-source video generation framework.   [Github,Project Page]

PROJECTS

- **Implementation of Deeplearning System** Follwing the course of CMU10714, accomplish a deep learning system that includes compuatation graph, auto differentiation, optimizer and cuda accleration.
- **Relevance Augmented Connected Papers** Improving balance between accuracy and diversity to meet users' research paper needs by semantic similarity-based retrieval
- **SuitFormer: Case-level representation learning for Identifying Frivolous Lawsuit** long text representation learning in legal domain to address long-tail distribution of frivolous lawsuit

HONERS

- **China Undergraduate Mathematical Contest in Modeling**   Second Prize, 10 2023
- **Student Extracurricular Academic Science and Technology Works Competition**   Special Prize, 03 2023
- **The Chinese Mathematical Competition**   First Prize, 11 2022
- **Huashu Cup Mathematical Contest in Modeling**   Second Prize, 08 2022

EXTRACURRICULAR ACTIVITIES

- **Presenter of Introduction to Linux** of "Missing Classes" lectures in RUC Computer Association   11 2023
- **Presenter of AITIME Debate** about 3D digital human development   08 2023