KEMING SHEN

2400101005@mails.szu.edu.cn · (+86) 131-7596-6520 · Homepage · GitHub

Research Interests: 3D Human Motion Generation, Computer Vision, Multimodal Models, Embodied AI, RL

EDUCATION

Shenzhen University · College of Computer Science and Software Engineering · M.Sc. · GPA 90.9/100 (3.90/4.0, Rank #1) 2024.09 – Present

Research Interests: Text-Driven 3D Human Motion Generation, Computer Vision, Diffusion Models, Multimodal Generation

Supervised by: Prof. Linlin Shen

Shenzhen University · College of Computer Science and Software Engineering · B.Eng. · GPA 87.7/100 (3.96/4.5, Rank #7) 2020.09 – 2024.06

B.Eng. in Computer Science and Technology, Software Engineering (Tencent Cloud Artificial Intelligence Elite Class)

Supervised by: Prof. Linlin Shen

ENGLISH PROFICIENCY

- **IELTS: 7.0** (L 7.5 / R 7.5 / W 7.0 / S 5.5), **CET-6**

SKILLS

- **Programming Languages:** Proficient in C/C++, Python, C#, and JavaScript.
- **Deep Learning:** Hands-on experience with PyTorch, TensorFlow, and OpenCV.
- **Linux Server Clusters:** Experienced in Linux server cluster administration and maintenance, including operations, management, and coordination of A100, A6000, and DGX V100 servers.
- **Agentic AI:** Hands-on vibe coding experience with Claude Code, Codex, CodeBuddy, and Antigravity; researched and developed Agent Skills and used Agentic AI tools for research automation.

PUBLICATIONS

[AAAI'26] · FineXtrol: Controllable Motion Generation via Fine-Grained Text

Keming Shen, Bizhu Wu, Junliang Chen, Xiaoqin Wang, Linlin Shen [Paper Link]

- Proposed FineXtrol, a controllable motion generation framework that replaces costly coordinate-sequence control with user-friendly fine-grained textual control signals.
- Designed a hierarchical contrastive learning module to improve the text encoder's discriminative ability for fine-grained motion descriptions, thereby enhancing generation quality.
- Experiments on the HumanML3D test set demonstrate strong performance in precise multi-body-part control and usability, indicating strong potential for downstream applications.

[Under Review] · Think with Motion: A Unified Understanding and Generation Framework for Individual and Interactive Human Motion

Keming Shen*, Xiaofeng Tan*, Bizhu Wu, Wanjiang Weng, Zehai Niu, Hongsong Wang, Linlin Shen

- Proposed I^2MoT, a unified framework for understanding and generating individual and two-person interactive human motion.
- Designed a compositional motion–relation representation that decouples individual movements from relative inter-person geometry, unifying individual and interactive motion data representations.
- Introduced separate experts for understanding and generation, together with participant-level chain-of-thought reasoning to guide interactive motion generation through motion understanding.

[CVPR'25] · MG-MotionLLM: A Unified Framework for Motion Comprehension and Generation across Multiple Granularities

Bizhu Wu, Jinheng Xie, **Keming Shen**, Zhe Kong, Jianfeng Ren, Ruibin Bai, Rong Qu, Linlin Shen [Paper Link]

- Proposed MG-MotionLLM, a unified framework that jointly models motion comprehension and generation tasks across multiple granularities.
- Developed a multi-granularity training scheme with auxiliary tasks to capture motion-related features at different granularity levels and strengthen comprehensive motion understanding.
- The model supports a range of new downstream tasks, including fine-grained motion editing, and enables cross-task generalization within a single unified model.

[Pre-print] · Ciallo: Coordinated and Controllable 3D Talking Avatar with Holistic & Fine-Grained Face-Body Space
Yuhang Guo, **Keming Shen**, Kaijun Deng, Siyang Song, Zehai Niu, Jinbao Wang, Linlin Shen [Paper Link]

- Proposed Ciallo, the first 3D talking avatar framework to unify gesture and facial expression generation at the representation level within a shared space.
- Designed a fine-grained body-part motion modeling strategy with spatiotemporally aware textual feature injection to enable coordinated and controllable motion generation for specific body parts.
- Built a scalable 3D talking avatar dataset from in-the-wild videos by combining a monocular tracker with VLM-based video understanding.

PROJECTS

- (3.4k Stars) Linly-Talker: An AI conversational digital avatar project enabling real-time dialogue with TTS, ASR, and LLMs.
- MotionSurf: An Agent-Skills-driven project for automated paper retrieval and understanding in human motion generation.
- ActNow: A lightweight text-driven motion generation visualization demo built with Gradio and FineXtrol.

COMPETITIONS

- Team Excellence Award (Top 10), IJCAI 2025 Deepfake Detection, Localization, and Explainability Challenge (Generative Large Model Security Track)
- Gold Award (Top 10), 2025 Shenzhen University "Liyuan Challenge" Innovation and Entrepreneurship Competition, Entrepreneurship Track
- First Prize, Guangdong Province, China Undergraduate Mathematical Contest in Modeling

PATENT

- A Method for Estimating the Effective Detection Distance of Cameras for Poultry Object Detection
  Patent No. 202311785633.3

SERVICE

- Reviewer for ICCV 2025 and AAAI 2026 in human motion modeling and computer vision.

HONORS & AWARDS

- 2022 Shenzhen University Star of Innovation and Entrepreneurship
- 2024 Shenzhen University Outstanding Undergraduate Graduate (University Level)
- 2024 Shenzhen University Outstanding Undergraduate Thesis among Top 100 Graduating Projects
- 2024 Shenzhen University Featured Student Interview, CSSE, SZU
- 2024 Shenzhen University Student Representative in Undergraduate Admissions Video, CSSE, SZU
- 2024 Shenzhen University Graduate Academic Scholarship (Special Prize)
- 2025 Shenzhen University Graduate Academic Scholarship (First Prize)
- 2026 Shenzhen University National Scholarship for Master's Students
- 2026 Shenzhen University Graduate Academic Scholarship (First Prize)

RESEARCH GOALS & CAREER PLANS

- **Research Interests:** Passionate about research in computer vision, particularly 3D human modeling, generative multimodal models, and embodied AI; actively follow advances from leading research groups and companies.
- **Near-Term Goal:** Plan to apply to Ph.D. programs starting in Fall 2027, deepen research insight and expertise, and pursue work that bridges academic research and practical applications.
- **During the Ph.D.:** Aim to collaborate with leading academic groups and industry teams, broaden research perspectives, strengthen engineering skills, and produce rigorous, impactful research with practical value.
- **Long-Term Goal:** After completing a Ph.D., pursue frontier research and product development at a leading company or research institute; with further academic and industry experience, consider a faculty career or technology entrepreneurship.