

CHENGYANG LI

☎ (+86)17521102038

✉ lichy22022@shanghaitech.edu.cn



EDUCATION

ShanghaiTech University, Shanghai

September 2022 – Present

Bachelor, Computer Science and Technology

School of Information Science and Technology

Ranking: 6/181, GPA: 3.8/4.0, Major GPA: 4.0/4.0

COURSES

Algorithms and Data Structures(CS101)	A+
Computer Architecture(CS110)	A+
Introduction to Machine Learning(CS182)	A+
Introduction to Programming(CS100)	A
Introduction to Science and Technology(SI100B)	A
Probability and Statistics(SI140A)	A
Signals and Systems(EI150)	A
Linear Algebra I, II	A
Mathematical Analysis I, II	A

PUBLICATIONS

SMGDiff: Soccer Motion Generation using diffusion probabilistic models

Hongdi Yang*, **Chengyang Li***, Zhenxuan Wu, Gaozheng Li, Jingya Wang, Jingyi Yu, Zhuo Su, Lan Xu

Website: <https://young2647.github.io/SMGDiff>

Arxiv preprint: <https://arxiv.org/pdf/2411.16216>

WORK EXPERIENCE

Virtual Reality and Visual Computing Center, ShanghaiTech

August 2023 – Present

Actively involved in group research, primarily focusing on 3D Vision. The work includes motion generation, human pose estimation, mesh generation, Stable Diffusion fine-tuning, etc. Currently work is focusing on LLM understanding of motion and multimodal integration.

Shanghai Elan Smart Sense Information Technology

August 2023 – Present

Primarily focusing on IMU-related research, including software applications and hardware development. Previously participated in human pose estimation using IMU and a multimodal, multi-person, and multi-object dataset.

ACHIEVEMENTS

The 14th Chinese Mathematics Competitions (CMC).

December 2022

Third Prize of Mathematics Category B

PROJECTS

Human Interaction Motion Capture System

Participating in the setup of a motion capture system, which integrates zcamera, imus, optitrack, etc. The system is capable of capturing multi-modal, multi-person, and multi-object data.

Multiple Interaction Generation

Generate multi-person and multi-object interaction actions based on the number of individuals, objects, and object point clouds. One downstream task of HOI-M3 dataset, which has been accepted by CVPR 2024.

Magic Shoes

Generate full-body dance movements based on the IMU signals from the shoes and music. We first reconstruct the lower-body movements based on the IMU signals, and then generate full-body movements based on music and lower-body conditioning. This project is presented as a company demo.

Controllable and Template-free Human-Object Interactions Generation

Given a piece of text and the desired object trajectory, we can first generate the object trajectory and mesh, then generate the human motion based on the object's movement. Compared to previous HOI generation task, our method reach controllable and template-free generation.

Stable Diffusion Fine-tuning

Generate image types that the user prefers based on their personality. Based on user survey dataset, we perform fine-tuning on the Stable Diffusion model.

TECHNICAL STRENGTHS

Proficiency in programming language

Python, C++, C

- Proficient in using PyTorch.
- Skilled in C and C++ programming languages.