Jiashen Du

Curriculum Vitae

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EDUCATION

University of California, Berkeley, Berkeley, CA 2024.08 - 2025.05 (Expected)
Junior Exchange student, Computer Science
- Total GPA: 4.0/4.0
- Related courses: Introduction to Artificial Intelligence, Special Topics: LLM Agents, Computer Security.

ShanghaiTech University, Shanghai, China 2022.09 - 2026.06 (Expected)
Junior, Computer Science
- Major GPA: 3.63/4.0
- TOEFL: 107/120
- Related courses: Introduction to Machine Learning, Discrete Mathematics, Computer Architecture, Mathematical Analysis.

RESEARCH AND WORK EXPERIENCE

VRVC Lab, Frontier Base, ShanghaiTech University 2023.02 - Present
Undergraduate Research Intern Shanghai, China
Highly involved in the work of the subject group, conducting and participating in research related to 3D Human-Object-Interaction reconstructions. Previous work has been accepted by CVPR 2024 and mainly focuses on fusing LLMs with computer vision now.

Shanghai Elan Smart Sense Information Technology Co.,LTD. 2023.04 - Present
Deputy researcher of Research Team & Head of Motion Capture Team Shanghai, China
Modified and refined the previous work of 4D-Association Graph. Implemented a fully regressive way to recover human poses from a single RGB image, then refined and showed up in I'M HOI. Acknowledged and benchmarked various motion capture reconstruction methods like MVPose, OpenPose, and SMPLify-X. Helped set up the motion capture environment and taught new lab members about the prerequisites and the procedure of motion capturing. Designed and contributed to the IMHD^2 dataset.

PUBLICATIONS

Conference Proceedings
I'M HOI: Inertia-aware Monocular Capture of 3D Human-Object Interactions
Chengfeng Zhao, Juze Zhang, **Jiashen Du**, Ziwei Shan, Junye Wang, Jingyi Yu, Jingya Wang, Lan Xu.
Now accepted by The IEEE/CVF Conference on Computer Vision and Pattern Recognition(CVPR). 2024
DOI: 10.1109/CVPR52733.2024.00076

SELECTED PROJECTS

How GPT learns layer by layer
This is a fundamental track project for COMPSCI194-196 Special Topics: LLM Agents and LLM Agents hackathon. We focused on exploring robust and generalizable internal representations of lightweight LLMs and investigating the progression of learned features with linear probes and sparse autoencoders in OthelloGPT. Our experiments reveal that SAEs provide a more robust and disentangled decoding of the features the model is learning, particularly for compositional attributes.
Participated as the **first author** of the project. Contributed most of the code work for the project and held the project code repository.

Zen
This is a Meta Quest track project for the Stanford XR Hackathon. We focused on recovering human psychological dysfunctions, aiming to provide a comprehensive treatment protocol by designing multiple simple interactive meditation games utilizing the power of Meta Quest3. We build interactive environments from scratch in Unity; users can choose different environments, background music, and meditation guidance in Zen. This project received attention and high praise from a judge, an Apple spatial computing department staff working on the meditation app in VisionPro.
Led and contributed most of the code work for Zen, implemented the riverside scene of the Zen game, and

held the project code repository.

Secure File Sharing System
This is the major project of COMPSCI161: Computer Security. We are required to design a secure file-sharing system on an unreliable data server where attackers can see and retrieve everything. Scored top 15% in class under completely unknown test cases.
Implemented login authentication, encryption/mac, and most unit tests of the project.

AWARDS AND HONORS

CUMCM: Chinese University Mathematical Contest in Modeling
The third prize
Year: 2023

ACTIVITIES AND SKILLS

ACTIVITIES
President of ShanghaiTech HiFi Research Club 2023.05 - Present
Organized events and club activities, such as going to the audio expos. Designing special amplifiers and leading club members to finish annual projects like replicating discontinued HiFi products and making electrostatic headphones. Being invited to host a lecture about headphone and IEM design at the school technology festival.

SKILLS
Programming Skills: Python(Proficient), C++(Competent), C(Competent), Rust(Familiar with)
Language Skills: English(Fluent), Chinese(Native)