WENSI(Vince) AI

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RESEARCH INTEREST

Embodied AI, Multi-Agent System, Generative Models, Visual Scene Understanding

EDUCATION

University of California, Los Angeles (UCLA), Los Angeles, CA Sep.2019-Jun.2023

- B.S. in Computer Science & Applied Mathematics, Cumulative GPA 3.916/4.0
- Relevant Coursework: Machine Learning & Data Science | Computer Vision | Reinforcement Learning | Computer Networks | Data Structures & Algorithms | Computer System Architecture | Probability & Statistics | Numerical Analysis | Linear Algebra

RESEARCH

Center for Vision, Cognition, Learning and Autonomy (VCLA) | *UCLA* Nov.2019-Present

Research Assistant | *Director: Ying-Nian Wu*

- Research Topics: Embodied AI, Multi-Agent System, Social Affordance
- Helped work on GenMotion, a collection of data-driven motion generator for animation synthesis
  - Helped completed GenMotion documentation and tutorial notebooks, and added PyPi support
  - Implemented Blender and Python rendering API, and integrated 2 generating models

EXPERIENCES

Metabit Trading | *SWE Intern* Jun.-Sep.2021

- Used Apache Airflow to automate generation and processing of daily slice of stock data
- Redesigned data generation workflow to remove local data and configuration file dependencies
- Optimized data generation operators and graphs and gained 30x speedup in data generation time
- Developed the Validator for comparing different versions of data and found 10+ inconsistencies

Colorizer | Deep Learning Project Jan.2022-Present

- Constructed a collection of deep learning model for video colorization
- Designed unified interface for models and included 4 state-of-the-art colorization models
- Set up an interactive web demo using streamlit that facilitates model comparison
- Incorporated popular video datasets and metrics for testing generalizability of different models

eXchange | *Front-end Developer* Mar.-Jun.2020

- Corporated with 3 students to develop eXchange, an online study resources exchange website
- Designed and implemented 3 main interactive UI and 5 components using React.JS and MaterialUI
- Implemented routing, data management, and client-server interactions using React Hooks

Catching Fire | *Tech Lead* Sep.2017-Dec.2019

- Led 8 students to develop a VR hazard evacuation training game via Unity3D and HTC Vive
- Simulated fire spread based on Unity's particle system, NavMesh Agent, and Collision System
- Utilized SteamVR and VRTK for user interaction with the virtual environment
- Paper published in RDFZ School Research Journal and won Bronze in China Thinks Big

PUBLICATIONS

Preprints

- Yizhou Zhao, **Wensi Ai**, Liang Qiu, Pan Lu, Feng Shi, Tian Han, Song-Chun Zhu, *GenMotion: Data-driven Motion Generators for Real-time Animation Synthesis*
- Yizhou Zhao, Liang Qiu, **Wensi Ai**, Pan Lu, Song-Chun Zhu, *Triangular Character Animation Sampling with Motion, Emotion, and Relation*
- Yizhou Zhao, Liang Qiu, **Wensi Ai**, Feng Shi, Song-Chun Zhu, *Vertical-Horizontal Structured Attention for Generating Music with Chords*

HONORS

- **Dean's Honor List** | UCLA 2019-2022
- **Latin Honor of MAGNA CUM LAUDE** | UCLA School of Engineering 2022
- **Departmental Honors** | UCLA Mathematics 2022

SKILLS

Programming Languages: Python, C/C++, Javascript, CSS, HTML, LaTeX
Softwares: Autodesk Maya, Blender, Unity3D
Frameworks: PyTorch, Sklearn, Pandas, Numpy, React.js, ROS

ACTIVITIES

UCLA ACM: Member of AI and ICPC Sep.2019-Sep.2020
CSMT-UCLA: Front End Developer Mar.-Jul.2020