Jiateng Liu

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ACADEMIC INTEREST

Deep Learning, Computer Graphic, Computer Vision, Nature language Processing

EDUCATION BACKGROUND

College of Computer Science and Technology, Zhejiang University **Hangzhou, China**

***Bachelor of Science* in Computer Science** *09/2019-07/2023(Expected)*

- **Overall GPA: 3.94/4.0; 89.82/100 Major GPA：4.0/4.0**
- **TOEFL：** 109（S24） **GRE:** 334+AW3.5

PUBLICATION

[1] Ya Zhao, Tianqi Shi, Jiateng Liu, Fangrui Kang. Lechao Cheng, Zunlei Feng (Primary), ***S-CLIP: Self-Contrastive Language-Image Pre-training***, Submitted to AAAI 2023.

[2] Jiawei Chen, Jiang Yang, Tianqi Shi,Jiateng Liu, Lechao,Cheng, Zunlei Feng, Mingli,Song, ***Life Regression based Patch Slimming for Vision Transformers,*** Submitted to AAAI 2023.

[3] Zunlei Feng, Zhijie Jia, Lechao Cheng, Jiateng Liu, Jie Song, Li Sun, ***Super Generalizable Foreground Image Segmentation***, Submitted to AAAI 2023.

RESEARCH EXPERIENCE

Stanford University **CA，USA**

Project: 3D Reconstruction from Curve Data *Mar. 2022~Present*

Research Intern (Online), Geometric Computation group *Advisor: Prof. Leonidas Guibas*

- Focusing on the task of shape reconstruction, specifically converting point clouds with curve sampling patterns into 3D implicit.
- Tried and implemented the baseline models of Learning-Based and not-Learning-Based.
- Plan to further improve the structure of attention network of the point clouds in the baseline method for the Learning-Based, and optimize its nearest-neighbor algorithm to get better curve representation.

University of Illinois, Urbana Champaign **IL，USA**

Project: The Research on Procedural Text Understanding *Feb. 2022~Present*

Research Intern (Online), Blender-NLP- Lab *Advisor: Prof. Heng Ji*

- Study the multi-modal tasks of procedural text understanding of robot task planning, which will better supervise the plan generation of plan compared with the visual supervision.
- Utilized the framework of Contrastive Learning to retrieve the corresponding start status description and goal status description, and deduced the decision model of language side through BART and other language models to further retrieve the visual model.

Zhejiang University **Hangzhou, China**

Project: The Optimization of 3-D Human Mesh Based on Transformer *July. 2021~ March.2022*

Research Intern, Lab of Visual Intelligence and Pattern Analysis, Advisor: Prof. Zicheng Liu & Mingli Song

- Aims to optimize the existing Transformer-based 3D body reconstruction models, typically based on MeshTransformer and MeshGraphormer, which employ transformer encoder with a simple model to reconstruct 3D human mesh.
- Proposed to introduce time series into the prediction step to obtain better results for the 3D mesh reconstruction.
- Completed the Pytorch framework of the model with Python.

- Build a new model for Transformer and expand current transformer abilities by adding a new dimension of input.

School of Computing, National University of Singapore **Singapore**

Project: Room Environment Adjustor Based on Posture Detection *May 2021- July 2021*

Summer Workshop, 2021 *Supervisor: Prof. Colin Tan*

- Applied CNN to develop a self-reacting system to automatically recognize normal human behaviors, including standing up, sitting in front of the desk, and sleeping on the desk, then turn on/off the light for us accordingly.
- Development tools: Rasberry Pi, DHT Sensor, etc.

PROFESSIONAL CONTESTS

How Fungi grow: The Balance of Plant Community *Mar. 2021*

2021 Mathematical Contest in Modeling / Interdisciplinary Contest in Modeling

- Built a systematic mathematical model to describe the development and declination of a micro-system.
- Applied the interpolation methods to reconstruct the relation curve between wood decomposition, the fungi growth rate and the moisture condition, and employed approximate method to expand the temperature range of the given curve.

Nimbus 2019-Aquatics Entertainment System *Mar. 2019*

"Yong Dian Cup" Innovation and Creativity Competition

- Designed an aquatics entertainment system integrated with intelligent lighting interaction and automatic scoring, to enhance the fun and experience of aquatics recreation.
- Realized the modules of the system, including streamer track, feedback score setting and intelligent display, etc.

SKILLS

- **Programming Skills:** Python, C, C++, Verilog, etc.
- **Assembly Language:** 8086/8088 assembly language etc.
- **Deep Learning Framework:** Familiar with Pytorch, OpenCV, Tensorflow, etc.

SELECTED COURSEWORKS

The Development of A 3D Racing Game *June 2021*

Coursework for Computer graphics; Score: 4.0/4.0

- Designed a single-player car racing game, including free surround mode, free drive mode and race scoring mode.
- Mainly realized the game background module, I/O module, perspective conversion module, etc.

Design of Shooting Game with VGA Display *Dec. 2020*

Coursework for Digital Logic Design; Score: 4.0/4.0

- Independently implemented a small shooting game using Verilog language in Xilinx ISE12.4 development environment on Sword Kintex7 experimental platform.

ADWARDS AND HONORS

- Second-class scholarship, Zhejiang University *2021/2020*
- Honorable Mention, 2021 Mathematical Contest in Modeling (MCM/ICM) *2021*
- Academic Excellent Award, Zhejiang University *2020*
- First prize (Zhejiang Province), College Students Physics Innovation Competition *2020*
- First prize, The 12th Chinese Mathematics Competitions *2020*