Haofan Wang

Zhejiang University, China

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Personal Profile

A third-year undergraduate who majors in the artificial intelligence, a new major in Zhejiang University. Interested in computer vision and robotics, having a research experience in 3D vision. Love reading and playing table tennis. Once a guitarist in a school band.

Education

Zhejiang University   *Hangzhou, China*
Bachelor in Artificial Intelligence   *September 2020 - present*

- GPA : 3.86/4(87.49/100)
- Rank : about 20/82
- Major Courses :
  Math : Linear Algebra, Mathematical Analysis, Probability Theory, etc.;
  Computer Science : Data Structure, Computer Organization And Design, Operating System, Database system, etc.;
  Artificial Intelligence : Machine Learning, Computer Vision, Computer Graphics, Natural Language Processing, AI Chips and system, etc.;
  Others : Introduction of Robot, etc.

Project Experience

ImTooth: Neural Implicit Tooth for Dental Augmented Reality   *CAD&CG lab*
Zhejiang University   *April 2022 - April 2023*

- The rise of neural implicit fields has greatly promoted the ability of 3D reconstruction and localization. According to the idea of "AR+ medicine", the modeling and localization ability of neural implicit fields are combined into AR glasses to assist clinical surgery of oral medicine.
- Under guidance of CAD&CG tutor and PHD students, and working with two other undergraduates. I was mainly responsible for 3D reconstruction in this project.
- NeuS was used to reconstruct textureless tooth models, and NeuS was modified to add depth information to assist reconstruction and registration.
- Combine reconstruction with pose estimation and AR glasses to realize the complete system

Course labs
Zhejiang University   *September 2021 - current*

- Mechine Learning: Handwriting numerals recognition on mnist. Using traditional mechine learning methods like SVM, and deep network like MLE, CNN, etc. Adding tricks like data augmentation, feature extraction by VAE, etc.
- Computer Graphics: Design a 3D horror game from scratch using opengl. Audio, action, collision detection etc. are added.
- Computer Organization and Design: Designed and implemented a five-stage pipelined CPU with interruption on FPGA using verilog.

Publications

ImTooth: Neural Implicit Tooth for Dental Augmented Reality
   Hai Li, Hongjia Zhai, Xingrui Yang, Zhirong Wu, Yihao Zheng, Haofan Wang, Jianchao Wu, Hujun Bao, Guofeng Zhang
   IEEE Transactions on Visualization and Computer Graphics (2023) pp. 1–10. 2023

Languages

English   Ielts 7.0

Skills

Programming   Python (PyTorch, pyplot, NumPy, Scikit-learn. etc.), C/C++.
Miscellaneous   Linux, LaTeX(Overleaf/R Markdown), Microsoft Office, Git.

References available upon request.