Yiqing Li

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Education

Ningbo University, B.Eng. in EECS, Computer Science and Technology.	Sept 2020 – June 2024

Experience

Research Intern, Zhejiang Scientific Research Institute of Transport – Hangzhou, CN   March 2024 - July 2024

- Participated in the UAVs in Multimedia competition at ACMMM (CCF-A) 2024. Independently worked under the guidance of mentors to explore various methods for improving drone-view localization accuracy in complex weather conditions, achieving a rank of 6th out of 22 teams.
- Collaborated with Xiang Men @ DLUT on a research project for Multi-Agent 3D Detection, working on conducting experiments and brainstorming ideas.
- Contributed to writing the proposal for the laboratory's grant application.

Intern, CV-lab, NIMTE, CAS – Ningbo, CN   May 2023 - June 2023

- Human Pose Estimation: Developed a lightweight network based on Lite-HRNet through distillation using an internal infrared dataset from a large network. Responsible for the entire process including data preprocessing, training weights, and deploying onnx.
- Algorithms for Health Smart Bracelet: Implemented various algorithm functionalities for a health smart bracelet based on the requirements provided by superiors.

Undergraduate Research Assistant, CPRE group, Ningbo University – Ningbo, CN   June 2022 - March 2023
Supervised by Prof. Yuqi Li

- Read and executed neural radiance field-related papers and open-source projects.
- Proposed a Physics Augmented Neural Radiance Fields method based on D-NeRF(CVPR'21), enabling the prediction of internal forces within objects from dynamic videos.
- Synthesized a 3D reconstruction dataset containing mechanical information using Abaqus and Blender. Developed corresponding research code.

Publications

Evaluating Domain Translation Approaches for Drone-Based Geo-Localization in Adverse Weather   in submission

Yiqing Li, Shuke He, Gang Liu, Chen Jin*

Technical report of our solution for ACMMM 2024 Competition UAVs in Multimedia

Projects

Bachelor Degree Project (Excellent)   Geometry Processing
Supervised by Lect. Xianzhong Fang

- Independently reproducing the l_0 method (siggraph'13) and conducting extensive related experiments.
- Proposing different optimization approaches to address the slow solving speed of optimization-based methods and conducting experiments, ultimately presenting a concise and effective optimization solution.
- Designing and implementing a parallelized l_0 algorithm based on 2, enabling efficient feature-preserving denoising of medium to large-scale meshes.

Competitions

Chinese Mathematics Competitions (CMC)   Provincial Second Prize

Mathematical Contest In Modeling (MCM/ICM)   Meritorious (Top 6%)

- Responsible for modelling and coding: Established a mathematical model for asteroid mining; Implemented code via python and wrote formula via LaTex.

Skills

Languages: C/C++(CUDA), Python, Julia

Developer Tools: Git, Cmake, Linux Shell, Markdown, Latex

Libraries: Eigen, Pytorch, Libigl/Openmesh

Misc

English Proficiency
- CET-6 : 518
- Postgraduate Entrance Examination 2024 : 85/100 (English I)

Open Source Activities
Participated in some open-source activities organized by Baidu's machine learning framework, PaddlePaddle, which involves writing Python, custom C++ operators, and CUDA code.
- Complex Group of Baidu's Qihang Project: completed PR included multiple objectives, certificate obtained.
- PaddlePaddle Hackathon 4: Joined with Jiawen Zhou @ ZJU, aim to reproduce DVGO(CVPR'22) with paddle to PaddleRendering.

Courses
Due to my interest in computer graphics, I took not only additional related elective courses within the university but also some extracurricular courses during my undergraduate studies.
- Undergraduate Courses: Linear Algebra(89), Lie Algebra(83), Numerical Computations(78), Finite Element Method and Programming(70), Stochastic Process(61).
- Extracurricular Courses: GAMES 101, GAMES301, Discrete Differential Geometry@CMU, etc...

Blogs
- My technical blogs(mainly about CG/CV) on zhihu have 1K+ collections
- one blog about CUDA was reposted by PaperWeekly