

# Yiqing Li

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## Education

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

## Experience

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

- Participated in the UAVs in Multimedia competition at ACM MM (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

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**Evaluating Domain Translation Approaches for Drone-Based Geo-Localization in Adverse Weather** ACM MM 2024 Workshop

*Yiqing Li*, Shuke He, Chen Jin\*

Technical report of our solution for ACM MM 2024 Competition: Drone Satellite Matching Challenge In Multiple-environment.

## Projects

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**Bachelor Degree Project (Top 20%)** Geometry Processing

Supervised by Lect. Xianzhong Fang

- Independently reproducing the  $l_0$  method of mesh denoising(sig'13) and conducting extensive 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

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**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

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

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

**Libraries:** Eigen, Pytorch, Libigl/Openmesh

## Misc

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### English Proficiency

- CET-6 : 518

### 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.

### Paper Reproduction

Out of interest, I reproduced several papers during my undergraduate studies.

- Mesh Denoising:  $l_0$ , Bilateral Filtering, Bilateral Normal Filtering, Guided Normal Filtering (degree project)
- Mesh Parameterization: Tutte Parameterization (homework of GAMES301, scored A-)
- Mesh Extraction: Marching Cubes (CUDA impl)
- Mesh Generation: Delaunay Triangulation (2D case)
- Image Processing:  $l_0$  (CUDA impl), Poisson Image Editing
- Rendering: Soft Rasterization, Ray Tracing

### Blogs

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

### Hobbies

piano, badminton, cycling.