Zinuo You

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Education

- **ETH Zurich** — Zurich, Switzerland
  MSc in Computer Science; Major in Visual and Interactive Computing; GPA: 5.80 — *2021-now*
  Computer Vision, Computer Graphics, Shape Modeling and Geometry Processing, Virtual Humans, Deep Learning for Autonomous Driving, Physically-based Simulation, Probabilistic Artificial Intelligence, etc.
- **Beihang University** — Beijing, China
  BEng in Computer Science and Technology (with Distinction); GPA: 3.89 (Top 2%) — *2017 - 2021*
- **Denmark Technical University** — Copenhagen, Denmark
  Exchange Student; GPA: 4.0 — *2018*

Research Experience

- **Computer Vision and Learning Group, ETH Zürich** — Zurich, Switzerland
  Semester Project - Supervisor: Dr. Anpei Chen, Prof. Andreas Geiger, Prof. Siyu Tang — *Sep 2023 - Nov 2023*
  - **Fast and Compact Representation for Large Scale Neural Rendering** [webpage] : Worked on a grid-based representation for volumetric light field rendering in unbounded natural scenes. The method bakes the light field with learnable feature probes alongside the capturing views. Designed a compact factorization for the probes. The method archives fast reconstruction with SOTA rendering quality within diverse inhomogeneous scenes. **CVPR 2024**.
- **Lab of Intelligent and Connected Vehicles, Tsinghua University** — Beijing, China
  Research Assistant - Supervisor: Dr. Hui Xiong, Prof. Keqiang Li — *June 2019 - May 2021*
  - **Trajectory Prediction on Human-Vehicle Interaction and Uncertainty Estimation**: Aimed to optimize interaction modeling for higher accuracy and to improve the prediction's interpretability for practicality on the system level. Proposed a multi-modal learning method based on CVAE. Sequential latent variables sampling is utilized for modeling high dynamic traffic scenes, enabling making predictions conditioned on concrete driving strategies. **Patent: CN110599521A**
- **Lu Sheng's Group, Beihang University** — Beijing, China
  Research Assistant - Supervisor: Bowen Cheng — *Dec 2020 - Feb 2021*
  - **Language-Guided Visual Grounding on 3D Point Clouds**: Worked on improving the grounding accuracy with enhanced VoteNet, designing loss function and joint training scheme.

Selected Course Projects

- **Physically-Based Cloth Simulation** [video]: Physically-Based Simulation Autumn 2021. Implemented position based dynamics algorithm for the cloth simulation interacting with objects on Taichi framework from scratch.
- **Fast Code for Triangle Listing** [report]: Advanced System Lab Spring 2022. Designed and implemented numerical optimization for three triangle-listing algorithms, including branch elimination, blocking, unrolling, vectorization and etc. Algorithm profiling with Intel VTune and Valgrind.
- **Learning Animatable Avatars with Multi-view Images** [report]: Virtual Humans Spring 2022. Implemented a low-data-demand pipeline for generating animatable human avatars from multi-view images. Mainly focused on 3D reconstruction with UNISURF on ZJU-MoCap.
- **Ray Tracing Renderer** [report]: Computer Graphics Autumn 2022. Implemented a ray tracer supporting global illumination. Focused on non-local means denoising, advanced camera effects and Disney BRDF.

Honors and Awards

- National Scholarship, 2020.
- Huawei Scholarship, 2019.
- Silver Medal, CCF Collegiate Computer System and Programming Contest, 2019.
- Beihang Academic Scholarship, Top 3%, 2018, 2019, 2020.
- Silver Medal, National Adolescents Science and Technology Innovation Contest, 2016.
- Second Prize, National Olympiad in Informatics in Provinces, 2015.

Teaching

- **Computer Organization Lab, Beihang University**: Teaching Assistant. Autumn 2019, Summer 2020.
- **Data Structure, Beihang University**: Teaching Assistant. Spring 2019.

Miscellaneous Information

- **Skills**: C/C++, Python, Java, Pytorch, Linux, Git, LaTex, Verilog, MIPS
- **Activities**: Piano, Swimming, Tennis, Hiking, Super Kondi