

Junchen Liu

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Education

University of Toronto

Toronto, 2025 - Present

Ph.D. student in Computer Science

Advisor: Prof. Sanja Fidler

Beihang University

Beijing, 2020 – 2024

B.Eng. in Computer Science and Technology

GPA: 3.89/4.0 (top 5%)

Experience

Berkeley Artificial Intelligence Research Lab, Research Intern

Berkeley, 2024 – 2025

Advisor: Prof. Angjoo Kanazawa

Tsinghua AI Industry Research (AIR), Undergraduate Research Intern

Beijing, 2023 – 2024

Advisor: Prof. Hao Zhao

Publications

Cameras as Relative Positional Encoding

NeurIPS 2025

Ruilong Li*, Brent Yi*, **Junchen Liu***, Hang Gao, Yi Ma, Angjoo Kanazawa

[webpage] [arxiv] [github]

Rip-NeRF: Anti-aliasing Radiance Fields with Ripmap-Encoded Platonic Solids

SIGGRAPH 2024

Junchen Liu*, Wenbo Hu*, Zhuo Yang*, Jianteng Chen, Guoliang Wang, Xiaoxue Chen, Yantong Cai, Huan-ang Gao, Hao Zhao

[webpage] [arxiv] [github] [youtube]

NeRRF: 3D Reconstruction and View Synthesis for Transparent and Specular Objects with Neural Refractive-Reflective Fields

Arxiv 2023

Xiaoxue Chen*, **Junchen Liu***, Hao Zhao, Guyue Zhou, Ya-Qin Zhang

[arxiv] [github]

Selected Awards

- Meritorious Winner, Interdisciplinary Contest in Modeling 2023 (Top 7%)
- Grand Prize of Study Scholarship, 2021-2022 (Top 2%)
- Grand Prize of Competition Scholarship, 2021-2022 (Top2%)
- First Prize, Beijing Division, The Chinese Mathematics Competition 2022
- National First Prize, Undergraduate Mathematical Contest in Modeling, 2022 (Top 0.65%)
- **National Scholarship, 2021-2022 (Top 0.2% highest scholarship from Ministry of Education of China)**
- First Prize, Beijing Division, The Chinese Mathematics Competition 2021

Academic Services

- IEEE Transactions on Pattern Analysis and Machine Intelligence (T-PAMI) reviewer, 2025
- ACM Multimedia (ACM MM) reviewer, 2025
- Transactions on Visualization and Computer Graphics (TVCG) reviewer, 2024

Skills

- Coding: Python(Pytorch), CUDA, C, C++ , Slang, Java, Go, Latex, Typst
- Language: Chinese (Native), English (IELTS 7.0/9.0)