

SIRUI XIE

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EDUCATION

Beijing University of Civil Engineering and Architecture, Beijing Sept. 2021 - Present

B.Eng in Vehicle Engineering: 2021-2022

B.Eng in Urban Design: 2022-Present

RESEARCH EXPERIENCE

PKU CoRe Lab Oct. 2024 - Present

Intern Fortunately Advised by *Prof. Yixin Zhu* from Peking University

- Exploring manipulator base placement problem and developing algorithms to solve it
- Completing journal/conference paper review work several times
- Exploring 6-dof object pose estimation in heavily occluded situation for robot camera sensors
- Learning and exploring Robotics research area

Thanks to Dr. Zihang Zhao and Dr. Leiyao Cui for their major help.

Lightwheel AI. Apr. 2024 - Oct. 2024

Intern Fortunately Advised by *Dr. Hao Zhao* from Lightwheel AI.

- Exploring *High-precision Map* editing Autonomous Driving System Simulation
- Exploring Autonomous Driving System Simulation using *NeRF* representation
- Exploring and creating 3D AIGC pipelines

Institute for AI Industry Research(AIR), Tsinghua University May. 2023 - Oct. 2024

Intern Fortunately Advised by *Prof. Hao Zhao* from Tsinghua University

- Exploring *Neural Radiance Fields(NeRF)* for scene editing and asset mining
- Exploring automatic city planning and visualization using GNN and NeRF
- Exploring and creating 3D AIGC pipelines

AI Design Lab Dec. 2022 - Present

Research Assistant Fortunately Advised by *Prof. Yuejia Xu* From *Beijing University of Civil Engineering and Architecture*

- Exploring automatic city planning and visualization using GNN and NeRF
- Undertaking the routine meetings to share research tips and usages of the latest AI tools on architecture design workflows

PUBLICATIONS

- ASSIST: Interactive Scene Nodes for Scalable and Realistic Indoor Simulation [arxiv]
- Structured NeRF for Indoor Scene Synthesis [ECCV2024]
- B*: Efficient and Optimal Base Placement for Fixed-Base Manipulators[Submitted to RAL]

SELECTED COMPETITIONS AND AWARDS

[First Price] Honor of Beijing Challenge Cup: Entrepreneurial Plan Competition	May. 2023
[Second Class Scholarship] Honor of Comprehensive Second Class Scholarship of BUCEA	Sept. 2022
[Silver Award] Honor of Beijing Challenge Cup: Entrepreneurial Plan Competition	Jun. 2022
[Third Prize] Honor of Blue Bridge Cup Programming Competition Beijing Division B	May. 2022
[Excellent Member] Honor of Excellent Komsomol Member of BUCEA	Apr. 2022

RELEVANT SELF-STUDY COURSES

- CS229:Machine Learning. Stanford University. by Andrew Ng.
- CS2230:Deep Learning. Stanford University. by Andrew Ng.
- STAT157:Introduction to Deep Learning. UC Berkeley. by Mu Li.
- CS231n:Convolutional Neural Networks for Visual Recognition.Stanford University. by Feifei Li.
- ...

SKILLS

- Programming Language: Python(Pytorch), C/C++, Rust, HTML/CSS/javascript, LaTeX, Markdown, etc.
- Other Skills: Graphic Design and Production, 3D Modeling/Render, Building Information System, Architecture and Urban design, etc.

Believe me, I am a quick learner.

OTHER

Student Organization: Student Art Group of BUCEA

Kaggle: House Price Competition, score: 0.125, rank: top14.3%

Southern Calligraphy Exhibition, reported by the People's Daily

Parametric design and 3D printing of the exhibition "The new world" of Zaha Studio