

Shuhong Zheng

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EDUCATION

University of Illinois, Urbana-Champaign (UIUC)

M.S. in Computer Science (Research-Oriented, Thesis-Based)

Illinois, U.S.

Aug. 2022 – May 2024 (expected)

Peking University (PKU)

B.S. in Computer Science

Beijing, China

Aug. 2018 – June 2022

RESEARCH EXPERIENCE

University of Illinois, Urbana-Champaign (UIUC)

Research Intern Guided by Prof. Yuxiong Wang

Illinois, U.S.

July 2021 – Present

- Working on scene understanding, based on neural radiance fields (NeRF)

Wangxuan Institute of Computer Technology, Peking University (PKU)

Research Intern Guided by Prof. Jiaying Liu

Beijing, China

Oct. 2020 – July 2022

- Working on image enhancement and human motion topics

PUBLICATIONS/MANUSCRIPTS

1. Mingtong Zhang*, **Shuhong Zheng***, Zhipeng Bao, Martial Hebert, and Yuxiong Wang. Beyond RGB: Scene-Property Synthesis with Neural Radiance Fields. *IEEE/CVF Winter Conference on Applications of Computer Vision (WACV)*, 2023. (* **Equal Contribution, Co-First Author**) (**First-Round Acceptance**)
Invited Paper at Workshop on AI for Creative Video Editing and Understanding. *European Conference on Computer Vision (ECCV)*, 2022.

COMPETITIONS

- **Winner** of the Grand Challenge on *IEEE International Workshop on Multimedia Signal Processing (MMSP)*, 2021
First Place on both IR (Image Restoration) track and IE (Image Editing) track, and the **Final Winner** of the *MMSP 2021 Grand Challenge*

TEACHING

- **Teaching Assistant** CS 361 - Probability and Statistics for Computer Science Fall 2022
Host a discussion section for students, including lecture, course review and organizing discussion

STANDARDIZED TESTS

- **TOEFL iBT** Mar. 2021
106 (Reading 28, Listening 29, Speaking 24, Writing 25)
- **GRE** Oct. 2020
331 + 3.5 (Verbal 161, Quantitative 170, Analytical Writing 3.5)

SCHOLARSHIPS AND AWARDS

- Excellent Graduate, Peking University 2022
- Merit Student, Peking University 2021
- Peking University Scholarship (Third-Class), Peking University 2021
- Academic Excellence Award, Peking University 2020
- Academic Excellence Award, Peking University 2019

OTHER PROJECTS

- **A Survey on High Dynamic Range (HDR) Imaging**
Conduct a survey and write a survey paper on HDR imaging, starting from classical traditional methods to deep learning methods. [pdf]
- **Image Classification**
Participate in the competitions of 50 scenes and 180 fine-grained bird species on Kaggle (<https://www.kaggle.com/>).
- **AI Poet**
Use deep learning methods to train an AI Poet that can write ancient Chinese poems like humans.
- **Image Restoration**
Use both traditional methods and deep learning methods to restore images damaged by random noise.
- **News Classification**
Use both traditional methods and deep learning methods to classify the news into different topics according to their titles.
- **Lab on Operating System**
Implement and optimize the functions of a toy operating system, including process management, memory system and file system.
- **Game AI**
Implement Game AIs on two games (*the Amazons* and *the Tank*) and compete on Botzone (<https://www.botzone.org.cn/>). Also design an interface for humans to play *the Amazons* with one another or against an AI player.

PROGRAMMING SKILLS

- **Programming Languages:** Python, C/C++, MATLAB, Verilog HDL
- **Machine Learning Frameworks:** PyTorch, TensorFlow, Keras