Youming Deng

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Education

Cornell University   *Ithaca, New York, United States*
Doctor of Philosophy in Computer Science   *Aug. 2023 - May. 2028 (Expected)*

Wuhan University   *Wuhan, Hubei, China*
Bachelor of Engineering in Spatial Informatics & Digitalized Technology   *Sep. 2019 - Jun. 2023*

Research Experience

Research Assistant at Cornell University   *Ithaca, New York, United States*
Advisor: Professor Abe Davis   *Aug. 2023 - Present*

- We are trying to solve failure case of Colmap for in the wild reconstruction
- We are trying to integrate pose and intrinsic optimization into reconstruction for Guassian-Splatting

Research Engineer at EPFL   *Rte Cantonale, Lausanne, Switerland*
Advisor: Professor Wenzel Jakob   *Apr. 2023 - Aug. 2023*

- We develop a conversion tool for different scene representations in Blender and Mitsuba3
- We added new features (*e.g.*, color ramp) to Mitsuba3 that are fully compatible with Blender

Research Intern at UC Merced   *Remote Intern*
Advisor: Professor Ming-Hsuan Yang   *Apr. 2022 - Aug. 2023*

- We present a method for high-fidelity geometry, materials, and illumination estimation
- We develop an efficient sphere tracing algorithm for implicit SDF
- We handle non-differentiability and model indirect lighting to improve environmental illumination

Research Assistant at Wuhan University   *Wuhan, Hubei, China*
Advisor: Professor Yansheng Li   *Jun. 2021 - Apr. 2022*

- We propose a coarse-to-fine training framework for Scene Graph Generation (SGG)
- The framework can efficiently handle the extreme long-tail effect in SGG

Publications

Physics-based Indirect Illumination for Inverse Rendering   *3DV 2024*
Youming Deng, Xueting Li, Sifei Liu, Ming-Hsuan Yang
Project Page / arXiv / Code

Hierarchical Memory Learning for Fine-Grained Scene Graph Generation   *ECCV 2022*
Youming Deng, Yansheng Li, Yongjun Zhang, Xiang Xiang, Jian Wang, Jingdong Chen, Jiayi Ma
arXiv / Code

Technical skills

Programming Languages/Tools	C, C++, Java, Javascript, Python, LaTeX
Frameworks	PyTorch, Keras, Dr.jit, Mitsuba, TensorFlow

Language proficiencies

Chinese	Native speaker
English	Proficient (TOEFL 106)