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SUHYUN SHIN (신수현)

- **Suhyun Shin**: https://sites.google.com/view/shshin98/home
- **MS-PhD Student** at POSTECH, Artificial Intelligence
- **Member of Baek's Group**: http://www.shbaek.com
- **Member of Computer Graphics Lab.**: http://cg.postech.ac.kr/
- Email: shshin9812@postech.ac.kr
- Google Scholar: https://scholar.google.com/

RESEARCH INTERESTS

My research focuses on **Computer vision** and **Computer graphics**, with a particular interest in the interaction between light and objects. Recently, my interest lie in capturing both the spectral and 3D geometric information of objects, integrating software, hardware, and optical techniques. I aim to understand the interactions between light and objects and to extract hidden information from these interactions. My goal is to implement these studies in a differentiable manner, using AI technologies to achieve more innovative and impactful results. I am enthusiastic about continuing research in areas related to cameras, displays, optics, and lenses, and I intend to make significant contributions to this field.

EDUCATION

09/2022–Present **POSTECH**, MS-PhD in Graduate School of Artificial Intelligence
- Advisor: Prof. Seung H. Baek

03/2017–08/2022 **Chung-Ang University**, B.S. in Mathematics

PUBLICATIONS

Top Journals/CS Conferences (Nature/Science/SIGGRAPH/SIGGRAPH Asia/TOG/CVPR/ICCV/ECCV)

[1] **Suhyun Shin**, Seungwoo Yoon, Ryota Maeda, Seung-Hwan Baek, "Dense Dispersed Structured Light for Hyperspectral 3D Imaging of Dynamic Scenes," Arxiv 2024

[2] **Suhyun Shin**, Seokjun Choi, Felix Heide, Seung-Hwan Baek, "Dispersed Structured Light for Hyperspectral 3D Imaging," Proc. IEEE Computer Vision and Pattern Recognition (**CVPR**) 2024

[3] Qiang Fu, Matheus Souza, Eunsue Choi, **Suhyun Shin**, Seung-Hwan Baek, Wolfgang Heidrich, "Limitations of Hyperspectral Imaging from RGB Images:A Data Perspective," Computational Optical Sensing and Imaging, Optical, 2024

AWARDS & HONORS

2021 SW/AI Contest, *Chung-Ang University, Seoul, Korea (2nd Place)*

2017 Full scholarship, *Chung-Ang University, Seoul, Korea*

TEACHING EXPERIENCE

Teaching Assistant

[1] Data Structure, POSTECH, 2024 Spring

[2] Data Structure, POSTECH, 2023 Fall

[3] AI Expert training, POSCO, 2023 July

[4] AI Expert training, POSCO, 2022 October

- Conduct a coding class based on the basic of deep learning and an overview of computer vision.

PROJECTS

[1] **Recommendation system on webtoons**, 2021, *Chung-Ang University*

- Predicting and recommending webtoons by employing latent factor-based collaborative filtering, involving matrix factorization and latent factors to determine user preferences.

[2] **Big data contest in Jeonju city**, 2021 April – 2021 May, *Jeonju City, Korea*

- Analyze and reallocate public bicycles using Deep learning to increase the activity of people from other regions in Jeonju city.

SKILLS

- **Programming Languages:** C, C++, MATLAB, Python
- **Tools:** OpenCV (computer vision library), Pytorch(Machine learning libaray for python), Blender
- **Language:** English, Korean