Youngchan Kim

ML Engineer @ Beeble

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🎓 Youngchan Kim

I'm interested in integrating AI into digital content creation to enhance visual realism and streamline workflows, allowing users to efficiently generate high-quality visually appealing outputs.

🎓 Education

Pohang University of Science and Technology (POSTECH)   Mar. 2022 – Feb. 2024
MSc in Graduate School of Artificial Intelligence   *Pohang, Korea*

> Graduate student at Computer Graphics Lab *(Advisor: Prof. Seung-Hwan Baek)*

Yonsei University   Mar. 2016 – Feb. 2022
BSc in Mathematics & Electrical and Electronic Engineering (Double Major)   *Seoul, Korea*

💼 Work Experience

Beeble   Apr. 2024 – Present
ML Engineer   *Seoul, Korea*

> Contribute to optimizing de-rendering algorithm for accurate PBR texture map extraction from a single image
> Analyze the perspective projection of 3D scene generated by unprojecting 2D image points with displacement
> Improve the depth-to-normal reconstruction method to support both perspective and orthographic projections
> Generate multi-view synthetic datasets of multi-human PBR texture maps under various lighting conditions

Harex InfoTech   Oct. 2021 – Dec. 2021
Research Engineer   *Seoul, Korea*

> Develop a purely data-based Digital Me algorithm for real-time personalized user recommendation

EVAR   Jan. 2021 – Feb. 2021
Software Engineer Intern   *Seongnam, Korea*

> Develop a Bluetooth communication system to remotely control the mobile EV charger using smartphone

📑 Publications

[1] **Spectral and Polarization Vision: Spectro-polarimetric Real-world Dataset**   CVPR 2024
Yujin Jeon, Eunsue Choi*, **Youngchan Kim**, Yunseong Moon, Khalid Omer, Felix Heide, Seung-Hwan Baek*   *(highlight)*

[2] **Neural Spectro-polarimetric Fields**   SIGGRAPH Asia 2023
***Youngchan Kim**, Wonjoon Jin, Sunghyun Cho, Seung-Hwan Baek*

[3] **AMPER(Aim-Measure-Predict-Evaluate-Recommend): The Paradigm of Digital Me**   ICEC 2022
*Kyoung Jun Lee, Baek Jeong, Yujeong Hwangbo, **Youngchan Kim**, Sungwon Bae, Taehoon Baek*

✎ Teaching Experience

Lecturer, *Samsung Electronics DX(Digital Transformation) Training*   Apr. 2024
> Deliver lectures on *Python programming and Data Science* for newly hired experienced employees

Teaching Assistant, *CSED700G Computational Imaging*   Spring 2023
> Supervise the student projects related to *Computational Imaging*

Teaching Assistant, *POSCO AI Expert Training*   Oct. 2022 / Jul. 2023
> Conduct coding sessions for the *Basic of Deep Learning and Computer Vision*

🗔 Projects

Multi-view 3D Reconstruction with Gradient-based Loss   Feb. 2021 – Aug. 2021
> Enhance the reconstruction quality of *DISN* algorithm by introducing occupancy difference at each point
> Capstone Design project (Spring 2021) *(Advisor: Prof. Yoonsik Choe)*

Silk Microneedle for Continuous Glucose Sensing   Jul. 2020 – Dec. 2020
> Fabricate a biocompatible microneedle glucose sensor combined with GF-monomer
> Capstone Design project (Fall 2020) *(Advisor: Prof. Ki Jun Yu)*

⚙ Skills

Language   Korean (Native), English (Conversational)

Programming   Python, Pytorch, Tensorflow, C/C++, MATLAB, Mitsuba 2/3, Linux, Docker

Experiments with Hardware   Machine Vision Camera (*LUCID Vision Labs TRIO51S-MC*), Hyperspectral Camera (*Cubert ULTRIS X20*), Liquid Crystal Tunable Filter (*Thorlabs KURIOS-XL1/M*)