Youngchan Kim
ML Engineer @ Beeble AI

✉ kyc9618@gmail.com   ⌂ youngchan-k
🌐 youngchan-k.github.io   in youngchan-k
📞 +82-10-3909-2338   🎓 Youngchan Kim

I'm interested in integrating AI into visual content creation to streamline and optimize workflows for generating high fidelity visual outputs, aiming to provide non-technical users with effective method.

🎓 Education

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

> [Master Thesis] Neural Spectro-polarimetric Fields *(Advisor: Prof. Seung-Hwan Baek)*

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

💼 Work Experience

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

> Build the foundation model for AI virtual production to effectively render videos within virtual environments
> Research and develop 2D-to-3D algorithm that can predict full 3D geometry and texture from a single 2D image
> Construct a light stage setup and acquire multi-view human datasets under various lighting conditions

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

> Develop an user-centric Digital Me algorithm to manage the individual's state in real-time

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

> 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

Video Restoration using Multi-view Polarization Mar. 2022 – Feb. 2024
> Build an imaging system to capture the multi-view spectro-polarimetric dataset
> Design the neural network to restore images captured in extreme conditions using polarization

Multi-view Consistent 3D Semantic Segmentation Jun. 2022 – Dec. 2022
> Render the multi-view datasets for 3D semantic segmentation
> Optimize the camera matrix for coordinate conversion through projection and unprojection

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 TRI051S-MC*), Hyperspectral Camera (*Cubert ULTRIS X20*), Liquid Crystal Tunable Filter (*Thorlabs KURIOS-XL1/M*)