Chunghyun Park

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Cheongam-Ro 77, POSTECH, Pohang-Si, South Korea (37673)

EDUCATION

POSTECH Pohang, South Korea
Ph.D. in Artificial Intelligence *March 2022 – Present*
- Supervised by Prof. Jaesik Park in the Computer Vision Lab.
- Research Interest: 3D Perception, 3D Reconstruction, and Geometric Deep Learning

POSTECH Pohang, South Korea
M.S. in Artificial Intelligence *March 2020 – Feb. 2022*
- Advisor: Prof. Jaesik Park
- Master's thesis: Fast Point Transformer for Large-scale 3D Scene Understanding

POSTECH Pohang, South Korea
B.S. in Mechanical Engineering *March 2014 – Feb. 2019*

PUBLICATIONS

International

[1] Seungwook Kim*, Yoonwoo Jeong*, **Chunghyun Park***, Jaesik Park, and Minsu Cho
SeLCA: Self-Supervised Learning of Canonical Axis
Conference on Neural Information Processing Systems Workshop (**NeurIPSW**) - Symmetry and
Geometry in Neural Representations (**NeurReps**), 2022
(*Equal contribution)

[2] Jaesung Choe*, **Chunghyun Park***, Francois Rameau, Jaesik Park, and In So Kweon
PointMixer: MLP-Mixer for Point Cloud Understanding
European Conference on Computer Vision (**ECCV**), 2022
(Nominated at the **Qualcomm Innovation Fellowship 2022**, Qualcomm Korea Corp.)
(*Equal contribution)

[3] **Chunghyun Park**, Yoonwoo Jeong, Minsu Cho, and Jaesik Park
Fast Point Transformer
IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**), 2022
(Received the 28th **HumanTech Paper Award (Silver Prize)**, Samsung Electronics Co., Ltd.)
(Received the **Qualcomm Innovation Fellowship 2022**, Qualcomm Korea Corp.)

[4] Yunseob Hwang*, Han Hee Lee*, **Chunghyun Park**, Bayu Adhi Tama, Jin Su Kim, Dae Young Cheung,
Woo Chul Chung, Young-Seok Cho, Kang-Moon Lee, Myung-Gyu Choi, and Seungchul Lee
*Improved Classification and Localization Approach to Small Bowel Capsule Endoscopy using Convolutional
Neural Network*
Digestive Endoscopy, 2021 (IF: 7.559)
(*Equal contribution)

Domestic

[1] **Chunghyun Park**, Yoonwoo Jeong, Minsu Cho, and Jaesik Park
대규모 점 군집 처리를 위한 효율적인 트랜스포머
Fall Conference of Korea Multimedia Society (KMMS), 2021

Projects

Open3D | *An open-sourced 3D vision library*   Sep. 2021 – Present
- Collaboration with Intel Corp., USA.
- Currently working on a high-fidelity 3D reconstruction system.
- Contributed to the neighbor search modules for the release of Open3D 0.16.

3D human capturing system | *Multiway registration and gaze estimation*   March 2020 – Oct. 2020
- Collaboration with Electronics and Telecommunications Research Institute (**ETRI**), South Korea.
- Implemented a software for matching colored point clouds from multiple RGB-D cameras to capture 3D humans.
- Developed an algorithm to estimate the gaze of 3D human by predicting facial landmarks.

AI in Healthcare | *Capsule endoscopy video understanding*   April 2018 – June 2019
- Collaboration with the Catholic Univ. of Korea Seoul St. Mary's Hospital, South Korea.
- Developed an algorithm for automatically detecting pathologies in the full-length capsule endoscopy videos.
- Implemented a software of the developed algorithm with a graphical user interface for medical doctors.

Professional Services

- **Reviewer,** IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**), 2022-2023
- **Reviewer,** International Conference in 3D Vision (**3DV**), 2022
- **Reviewer,** European Conference on Computer Vision (**ECCV**), 2022

Awards

- **Qualcomm Innovation Fellowship 2022 Winner** (*Fast Point Transformer*), Qualcomm Korea Corp., 2022
- **Qualcomm Innovation Fellowship 2022 Finalist** (*PointMixer*), Qualcomm Korea Corp., 2022
- **The 28th HumanTech Paper Award (Silver Prize)**, Samsung Electronics Co. Ltd., 2022