

# Chunghyun Park

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

## EDUCATION

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### POSTECH

*Ph.D. in Artificial Intelligence*

- Supervised by Prof. Jaesik Park in the Computer Vision Lab.
- Research Interest: 3D Perception, 3D Reconstruction, and Geometric Deep Learning

Pohang, South Korea

March 2022 – Present

### POSTECH

*M.S. in Artificial Intelligence*

- Advisor: Prof. Jaesik Park
- Master's thesis: Fast Point Transformer for Large-scale 3D Scene Understanding

Pohang, South Korea

March 2020 – Feb. 2022

### POSTECH

*B.S. in Mechanical Engineering*

Pohang, South Korea

March 2014 – Feb. 2019

## PUBLICATIONS

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### International

- [1] Seungwook Kim\*, Yoonwoo Jeong\*, **Chunghyun Park\***, Jaesik Park, and Minsu Cho (\*equal contribution)  
*SeLCA: Self-Supervised Learning of Canonical Axis*  
Conference on Neural Information Processing Systems Workshop (**NeurIPSW**) - Symmetry and Geometry in Neural Representations (**NeurReps**), 2022
- [2] Jaesung Choe\*, **Chunghyun Park\***, Francois Rameau, Jaesik Park, and In So Kweon (\*equal contribution)  
*PointMixer: MLP-Mixer for Point Cloud Understanding*  
European Conference on Computer Vision (**ECCV**), 2022  
- Nominated at the **Qualcomm Innovation Fellowship** 2022, Qualcomm Korea Corp.
- [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 (\*equal contribution)  
*Improved Classification and Localization Approach to Small Bowel Capsule Endoscopy using Convolutional Neural Network*  
Digestive Endoscopy, 2021 (IF: 7.559)

### 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

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### **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** | *Multi-way registration and gaze estimation*

March 2020 – Oct. 2020

- Collaboration with Electronics and Telecommunications Research Institute (**ETRI**), South Korea.
- Implemented software for matching colored point clouds from multiple RGB-D cameras to capture 3D humans.
- Developed an algorithm to estimate the gaze of 3D humans 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 full-length capsule endoscopy videos.
- Implemented software of the developed algorithm with a graphical user interface for medical doctors.

## PROFESSIONAL SERVICES

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- **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

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- **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