

# JONGSEOB YUN

## PERSONAL DATA

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Name: Jongseob Yun  
Gender: Male  
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## EDUCATION

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08/2020 | M.S. in Mechanical Engineering, KAIST, Korea  
Korea advanced institute of science and technology  
Major : Human pose/shape estimation, computer vision  
Advisor : Kuk-Jin Yoon

08/2018 | B.S. in Mechanical Engineering, POSTECH, Korea  
Pohang university of science and technology

## EXPERIENCES

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- NAVERLABS KOREA, 12/2020 - present
- KETI(Korea Electronics Technology Institute), 08/2020 - 12/2020

## SKILLS

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Advanced	Python - numpy, open3d, scipy, opencv, etc. Pytorch - CNN, transformer, MLP design
Intermediate	CERES - pose optimization, camera calibration Docker - docker image and container managing Git - project managing C/C++ - opencv, tbb, boost, eigen, etc.
Beginner	Django JavaScript HTML/CSS

## ABILITIES

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Camera calibration	Rich understanding of camera models (pinhole, KB, UCM, DS) Intrinsic calibration based on CERES, basalt and kalibr Extrinsic calibration based on CERES
Camera pose estimation	SE3 optimization using CERES MultiView PnP
3D reconstruction	TSDF volume fusion and visual hull Structure-from-Motion and Multiview Stereo Neural reconstruction (NeRF, NeuS, IDR, etc.)
2D/3D human pose estimation	2D multi-person joint regression (openpifpaf, openpose, etc.) 3D human joint annotation GUI development SMPL fitting on RGBD image
Omni-image processing	Skillful uses of ERP, cubic, icosahedron representations Image warping and visualization

## SCHOLARSHIPS

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1. On Dream Future Industry Graduate School Scholarship: Hyundai Chung Mong-Koo Foundation, 08/2019 - 08/2020

## PUBLICATIONS

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### Journal

1. Y. Lee, J. Jeong, **J. Yun**, W. Cho and K. Yoon, "SpherePHD: Applying CNNs on 360° Images with Non-Euclidean Spherical PolyHeDron Representation," in *IEEE Transactions on Pattern Analysis and Machine Intelligence*, doi: 10.1109/TPAMI.2020.2997045.  
\*co-second author

### Conference

1. Y. Lee, J. Jeong, **J. Yun**, W. Cho and K. Yoon, "SpherePHD: Applying CNNs on a Spherical PolyHeDron Representation of 360° Images," *2019 IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, Long Beach, CA, USA, 2019, pp. 9173-9181, doi: 10.1109/CVPR.2019.00940.  
\*co-first author

## RESEARCH PROJECTS

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1. Deep learning-based Hand Pose Estimation for Low Resolution Image: KETI, 03/2020 - 11/2020
2. Automatic Color Texture Generation for 3D Point Cloud Data: KETI, 06/2019 - 11/2019
3. Vision-based Abnormal Event Detection: Hyundai Heavy Industries, 04/2019 - 12/2019

## TECHNICAL PROJECTS

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1. Stereo depth estimation for robot navigation : NAVERLABS, 12/2022 - present
2. Neural implicit surface reconstruction for 3D object modeling : NAVERLABS, 01/2022 - 12/2022
3. Robust camera pose estimation based on multiview PnP and apriltags : NAVERLABS, 09/2021 - 04/2022
4. 3D human pose data generation : NAVERLABS, 03/2021 - 09/2021