

# Hongsuk Benjamin Choi

## PERSONAL DETAILS

*Phone* (+1) 929-508-6991  
*Mail* [redstonepo@gmail.com](mailto:redstonepo@gmail.com)  
*Homepage* [GitHub.io](#) / [Google Scholar](#)

## RESEARCH INTERESTS

3D computer vision and robotics, especially motion capture and 3D human hand & body geometry and physics related topics

## EDUCATION

**M.S.**, Electrical and Computer Engineering  
Seoul National University (SNU), Seoul, South Korea  
Advisor: [Prof. Kyoung Mu Lee](#)

**B.S.**, Computer Science and Engineering  
Seoul National University (SNU), Seoul, South Korea

**B.A.**, Business Administration Mar 2013 - Feb 2020  
Seoul National University (SNU), Seoul, South Korea

## PUBLICATIONS

- [1] **Hongsuk Choi\***, Hyeongjin Nam\*, Taeryung Lee, Gyeongsik Moon, Kyoung Mu Lee, “Empirical Study of Pre-training a Backbone for 3D Human Pose and Shape Estimation” (\* equal contribution), **ICLR 2023**
- [2] **Hongsuk Choi\***, Gyeongsik Moon\*, Matthieu Armand, Vincent Leroy, Kyoung Mu Lee, Gregory Rogez, “MonoNHR: Monocular Neural Human Renderer” (\* equal contribution), **3DV 2022** [[ARXIV](#)][[VIDEO](#)]
- [3] **Hongsuk Choi**, Gyeongsik Moon, Joonkyu Park, and Kyoung Mu Lee, “Learning to Estimate Robust 3D Human Mesh from In-the-Wild Crowded Scenes”, **CVPR 2022**, [[ARXIV](#)][[CODE](#)]
- [4] JoonKyu Park, Yeonguk Oh, Gyeongsik Moon, **Hongsuk Choi**, Kyoung Mu Lee, “HandOccNet: Occlusion-Robust 3D Hand Mesh Estimation Network”, **CVPR 2022**, [[ARXIV](#)][[CODE](#)]
- [5] **Hongsuk Choi**, Gyeongsik Moon, Ju Yong Chang, and Kyoung Mu Lee, “Beyond Static Features for Temporally Consistent 3D Human Pose and Shape from a Video”, **CVPR 2021**, [[ARXIV](#)][[VIDEO](#)][[CODE](#)]
- [6] **Hongsuk Choi\***, Gyeongsik Moon\*, and Kyoung Mu Lee, “Pose2Mesh: Graph Convolutional Network for 3D Human Pose and Mesh Recovery from a 2D Human Pose”

(\* equal contribution), **ECCV 2020**, [[ARXIV](#)][[PDF](#)][[VIDEO](#)][[CODE](#)]

[7] Gyeongsik Moon, **Hongsuk Choi**, Kyoung Mu Lee, “NeuralAnnot: Neural Annotator for 3D Human Mesh Training Sets”, **CVPR 2022 workshop**, [[ARXIV](#)][[CODE](#)]

[8] Gyeongsik Moon, **Hongsuk Choi**, Kyoung Mu Lee, “Accurate 3D Hand Pose Estimation for Whole-Body 3D Human Mesh Estimation”, **CVPR 2022 workshop**, [[ARXIV](#)][[CODE](#)]

[9] Gyeongsik Moon, **Hongsuk Choi**, Sanghyuk Chun, Jiyoung Lee, Sangdoo Yun, “3D Pseudo-GTs Matter: Towards 3D Human Mesh Estimation in the Wild”, under review

## HONORS

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- **Distinguished** Master Dissertation Award, Seoul National University (2022).
- **1st place** and **2nd place** at the *without association* track of **3D human pose estimation in the wild (3DPW) challenge**, workshop conjunction with **ECCV 2020** (1st in a joint orientation metric and 2nd in a joint position metric)
- **1st place** at the Qualcomm IT Tour 2019 presentation competition held by Qualcomm, proposed AR-based workout coaching system and selected as a winner by Jim Cathey (President of Qualcomm Global Business)
- Selected as a finalist in **Qualcomm Innovation Fellowship Korea 2020, 2021**

## PROJECTS

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HumanFit: A New Large-scale Dataset for Human Fitness  
Evaluation and Feedback May 2020 - Dec 2020  
[Dataset link](#) / co-op with Sleek, SuperbAI, KakaoBrain, and Wehealed

A Large-scale Dataset for 3D Human Pose and Mesh Estimation May 2020 - Dec 2020  
[Dataset link](#) / co-op with SweetK and MotionTechnology

Human Part Segmentation for AI-based Animation Coloring Mar 2019 - Jun 2019  
co-op with NCSOFT

## EXPERIENCE

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### ML Research Engineer

- Hand&Object Reconstruction and Robotics Perception June 2022 - Present  
Samsung Robotics AI Center, New York, USA

### Visiting Researcher

- Data Augmentation for  
3D Human Pose and Shape Estimation Mar 2022 - May 2022  
NAVER AI LAB, Seoul, Korea

### Research Intern

- Neural Human Rendering for an Arbitrary Person  
with Implicit Function (NeRF) Apr 2021 - Oct 2021  
NAVER LABS Europe, Grenoble, France  
Advisor: [Gregory Rogez](#), Vincent Leroy

### Teaching Assistant

- Introduction to Computer Programming Mar 2019 - Dec 2020  
Department of Business Administration, SNU

### Research Intern

- 3D Human Pose Estimation from a Single Image Aug 2019 - Feb 2020  
Department of Electrical and Computer Engineering, SNU  
Advisor: [Prof. Kyoung Mu Lee](#)
- Pedestrian Tracking from a Drone Captured Video Mar 2019 - Jul 2019  
Department of Electrical and Computer Engineering, SNU  
Advisor: [Prof. Kyoung Mu Lee](#)

### Start-Up Team Leader & Software Engineer

- Workout Partner Matching and Diary Sharing Service Jul 2017 - Feb 2019  
Publicly launched at App Store & Google Play Store

### Software Engineer Internship

- Movie Poster Recognition and Trailer Play with OpenGL Jun 2018 - Aug 2018  
NAVER, Seoul, Korea  
Advisor: Jaeho Lee

## MILITARY SERVICE

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Sergeant Squad Leader of Weather Group Mar 2015 - Mar 2017  
Air Force, Republic of Korea

## SKILLS

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PYTHON, PYTORCH, C, JAVA, ANDROID, ANGULARJS, TYPESCRIPT, L<sup>A</sup>T<sub>E</sub>X

## SOMETHING DIFFERENT

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I enjoy bouldering (indoor climbing) with friends on weekends. I go to a gym almost every day. Benjamin is the English name I used when I lived in Bristol, the U.K. American pop and J-pop are my favorite music. At college, I played an electric guitar in a rock band. I used to play LOL (e-sports) a lot.