Sungheon Park

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Work Experience	**Samsung Advanced Institue of Technology (SAIT)** (*Jul 2019 – *) Staff Researcher, Computer Vision Lab - Developed face anti-spoofing algorithm for Samsung Galaxy S20.
Education	**Ph.D.** in **Engineering** (*Feb 2019*) Department of Transdisciplinary Studies, Graduate School of Convergence Science and Technology, *Seoul National University, Seoul, Korea* Thesis: "3D Reconstruction, Weakly-Supervised Learning, and Supervised Learning Methods for 3D Human Pose Estimation" Advisor: Prof. Nojun Kwak GPA : 4.02 / 4.3 **M.S.** in **Computer Science** (*Feb 2014*) *Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea* Thesis: "3D Reconstruction of Manhattan Worlds Based on a Single Image Using Graph Cut Optimization and Minimal Spanning Tree" Advisor: Prof. Hyun S. Yang GPA : 3.82 / 4.3 **B.S.** in **Computer Science** (*Feb 2012*) *Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea* Minor : Business Economics Program GPA : 3.33 / 4.3
Research Interests	2D/3D Human Pose Estimation, 3D Reconstruction of Non-Rigid Objects
Peer-reviewed Publications	**Sungheon Park***, Minsik Lee*, and Nojun Kwak, "Procrustean Regression Networks: Learning 3D Structure of Non-Rigid Objects from 2D Annotations," *European Conference on Computer Vision* (**ECCV**), 2020. (Acceptance rate : 27%, *: Equal contribution) Jihye Hwang, Jieun Lee, **Sungheon Park** and Nojun Kwak, "Pose estimator and tracker using temporal flow maps for limbs," *International Joint Conference on Neural Networks* (**IJCNN**), 2019. **Sungheon Park** and Nojun Kwak, "3D Human Pose Estimation with Relational Networks," *British Machine Vision Conference* (**BMVC**), 2018. (Acceptance rate : 29.9%) **Sungheon Park** and Nojun Kwak, "Independent Component Analysis by Lp-norm Optimization", in *Pattern Recognition* (**PR**), vol. 76, pp. 752-760, Apr, 2018. (SCI, IF:5.898) **Sungheon Park**, Minsik Lee, and Nojun Kwak, "Procrustean Regression: A Flexible Alignment-Based Framework for Nonrigid Structure Estimation", in *IEEE Transactions on Image Processing* (**TIP**), vol. 27, no. 1, pp. 249-264, Jan, 2018. (SCI, IF:6.79) **Sungheon Park**, Taehoon Kim, Kyogu Lee, and Nojun Kwak, "Music Source Separation Using Stacked Hourglass Networks," *International Society for Music Information Retrieval Conference* (**ISMIR**), 2018. Jihye Hwang, **Sungheon Park**, and Nojun Kwak, "Athlete Pose Estimation by a Global-Local Network", *3rd International Workshop on Computer Vision in Sports* (**CVPR Workshops**), 2017.

Sungheon Park and Nojun Kwak, "Analysis on the Dropout Effect in Convolutional Neural Networks," *Asian Conference on Computer Vision* (**ACCV**), 2016. (Acceptance rate : 24%)

Sungheon Park, Jihye Hwang, and Nojun Kwak, "3D Human Pose Estimation Using Convolutional Neural Networks with 2D Pose Information," *Geometry Meets Deep Learning Workshop* (**ECCV Workshops**), 2016.

Sungheon Park and Nojun Kwak, "Illumination Robust Optical Flow Estimation by Illumination-Chromaticity Decoupling," *IEEE International Conference on Image Processing* (**ICIP**), 2015.

Sungheon Park and Nojun Kwak, "Cultural Event Recognition by Subregion Classification with Convolutional Neural Network," (3rd place in cultural event classification challenge) *ChaLearn Looking at the People Workshop* (**CVPR Workshops**), 2015.

Sungheon Park, Hyeopwoo Lee, Suwon Lee, and Hyun S. Yang, "Line-based Single View 3D Reconstruction in Manhattan World for Augmented Reality," *14th ACM SIGGRAPH International Conference on Virtual Reality Continuum and its Applications in Industry* (**VRCAI**), 2015.

Jinki Jung, Jihye Hong, **Sungheon Park**, and Hyun S. Yang, "Smartphone as an Augmented Reality Authoring Tool via Multi-touch Based 3D Interaction Method," *11th ACM SIGGRAPH International Conference on Virtual-Reality Continuum and its Applications in Industry* (**VRCAI**), 2012.

Other Publications	**Sungheon Park**, Myunggi Lee, and Nojun Kwak, "Polyp Detection in Colonoscopy Videos Using Deeply-learned Hierarchical Features", *Technical Report, Seoul National University*, 2015.
Competitions	PoseTrack Challenge 2018 (ECCV 2018 Workshops) **Honorable mention award** for the work "LimbFlowNet: Multi-Stride Pose Tracker and Estimator" in multi-person pose tracking challenge ChaLearn Looking at People Challenge 2015 (CVPR 2015 Workshops) **3rd place award** in cultural event recognition challenge
Awards and Scholarships	Gold Medal, Samsung Annual Awards (2020) Samsung Electronics, for commercialization of 2PD face anti-spoofing algorithms Outstanding Thesis Award (2019) Graduate School of Convergence Science and Technology, Seoul National University National Science and Engineering Undergraduate Scholarship (2006-2009) Korea Student Aid Foundation
Other Work Experiences	Sentence Inc. (Seoul, Korea, *Jul 2012 - Sep 2013*) NXC Corp. (Jeju, Korea, *Aug 2011 - Apr 2012*) YD Online Corp. (Seoul, Korea, *Apr 2010 - Aug 2011*) - worked as a part-time iOS client programmer, developed four iOS apps