

TAEIN KWON

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RESEARCH INTERESTS

Action Recognition, Video Analysis, Egocentric Vision, Augmented Reality (AR), Virtual Reality (VR), 3D Vision, Robot-learning, Multimodal Human-AI Interaction, and Computer Vision

EDUCATION

ETH Zürich Ph.D., Computer Science - Supervisor: Prof. Marc Pollefeys	Zürich, Switzerland Present
University of California Los Angeles (UCLA) M.S., Electrical and Computer Engineering	CA, USA Jun. 2018
Yonsei University B.S., Electrical and Electronic Engineering	Seoul, Korea Aug. 2015

RESEARCH EXPERIENCE

ETH Zürich - Computer Vision and Geometry Lab <i>Scientific Assistant</i>	Zürich, Switzerland Nov. 2018 - Present
<ul style="list-style-type: none">Developing a framework to obtain fine-grained human action labels using self-supervised learning to guide users in AR.Collecting a dataset that contains precise 3D hand poses and interacted object poses using synchronized Kinect cameras to understand first-person interaction recognition.	
UCLA - Center for Vision, Cognition, Learning, and Autonomy and Joo Lab <i>Graduate Student Researcher</i>	CA, USA Oct. 2016 - Jun. 2018
<ul style="list-style-type: none">Designed a reinforcement learning-based framework for an AI agent to navigate a specific target room in house models using human feedback in VR.Constructed a hand gesture recognition system and its model based on Long Short-Term Memory (LSTM) algorithm in VR.	
Yonsei University - Machine Intelligence Lab. <i>Undergraduate Student Researcher</i>	Seoul, Korea Feb. 2014 - Aug. 2015
<ul style="list-style-type: none">Proposed a novel biometric that verifies people based on their unique weight balance and pressure distribution on the "Wii Balance Board" using a self-collected database of 80 subjects.	

PROFESSIONAL EXPERIENCE

Microsoft Research <i>Research intern</i>	Redmond, USA (remote) Jun. 2022 - Present
<ul style="list-style-type: none">Investigating multi-modal video understanding in MR.	
Clova AI, Naver & Line Cooperation <i>Research intern</i>	Gyeonggi, Korea Jun. 2018 - Aug. 2018
<ul style="list-style-type: none">Estimated depth from monocular images for fast moving objects.	
SOODAL <i>CEO and Co-founder</i>	Seoul, Korea Aug. 2014 - Dec. 2015
<ul style="list-style-type: none">Devised a machine learning scheduler application that suggests events to people based on personal data patterns using collaborative filtering.	

TEACHING EXPERIENCE

ETH Zürich <i>Teaching Assistant</i> , Computer Vision, 3D Vision, Mixed Reality	Zürich, Switzerland Oct. 2018 - Present
UCLA <i>Teaching Assistant</i> , Intermediate Programming, AI and new media	CA, USA Jan. 2017 - Jun. 2018
Instituto Cristiano Interactivo <i>Volunteer Teacher</i> , C Programming	Ciudad Del Este, Paraguay Aug. 2014

SKILLS

Languages:	Python, C/C++, Matlab, R, SQL
Specialties:	Action Recognition, 3D Vision, Reinforcement Learning, Computer Vision, VR/AR
Tools:	Pytorch, Tensorflow, HoloLens, Unity, Unreal Engine, Kinect

AWARDS

Scholarship , Recipient of Korean Government Scholarship from NIIED	2018
Scholarship , Yonsei International Foundation	2016
IBM Innovation Prize , Startup Weekend, Technology Competition	2015
Best Technology Prize , Internet of Things (IoT) Hackathon by the government of Korea	2014
Best Laboratory Intern , Yonsei Institute of Information and Communication Technology	2014
Scholarship , Yonsei University Foundation	2014, 2010
Creative Prize , Startup Competition, Yonsei University	2014
Scholarship , Korean Telecom Group Foundation	2011

TALKS

Applied Machine Learning Days (AMLD) @ EPFL & Swiss JRC	Mar. 2022
ICCV 2021 Workshop on Egocentric Perception, Interaction and Computing (EPIC)	Oct. 2021
Swiss Joint Research Center (JRC) Workshop 2021	Apr. 2021

ACADEMIC SERVICE

Reviwer: Siggraph
Organizer: KSAE Open Seminar @ ETH Zürich

PUBLICATION

Taein Kwon, Bugra Tekin, Siyu Tang, Marc Pollefeys, "Context-Aware Sequence Alignment using 4D Skeletal Augmentation", Conference on Computer Vision and Pattern Recognition (CVPR), 2022.
Taein Kwon, Bugra Tekin, Jan Stuhmer, Federica Bogo, Marc Pollefeys, "H2O: Two Hands Manipulating Objects for First Person Interaction Recognition", International Conference on Computer Vision (ICCV), 2021.
Taein Kwon, Eunjeong Park, Hyuk-jae Chang, "Smart Refrigerator for Healthcare Using Food Image Classification", ACM Conference on Bioinformatics, Computational Biology, and Health Informatics (ACM BCB), 2016.