

Sunghyun Park

AI RESEARCHER

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Research Interest

Computer Vision, Data-Centric AI, Human Avatar Digitization, Image and Video Synthesis

Education

Integrated Ph. D. in Artificial Intelligence

KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY (KAIST), GRADUATE CANDIDATE

- Advisor: Prof. Jaegul Choo

Daejeon, S.Korea

Mar. 2020 - Present

M.S. in Artificial Intelligence

KOREA UNIVERSITY, GRADUATE CANDIDATE

- Advisor: Prof. Jaegul Choo

Seoul, S.Korea

Sep. 2019 - Feb. 2020

B.S. in Computer Science

KOREA UNIVERSITY

Seoul, S.Korea

Mar. 2013 - Aug. 2019

Publications

CONFERENCE PAPERS

- C1** S. Kim*, **S. Park***, S. Chung*, J. Lee, Y. Lee, H. Kim, Mr Prabhat, and J. Choo. "Learning to Focus and Track Extreme Climate Events"
British Machine Vision Conference (BMVC), 2019, Cardiff, UK, Accepted as Spotlight
- C2** **S. Park***, and S. Choi. "PP-VTON: Pose-Preserving Image-based Virtual Try-On Network"
Korea Software Congress (KSC), 2019, Pyeongchang, South Korea
- C3** **S. Park***, K. Kim*, J. Lee, J. Choo, J. Lee, S. Kim, and E. Choi. "Vid-ODE: Continuous-Time Video Generation with Neural Ordinary Differential Equation"
AAAI Conference on Artificial Intelligence (AAAI), 2021, Virtual, Accepted
- C4** S. Choi*, **S. Park***, M. Lee*, and J. Choo. "VITON-HD: High-Resolution Virtual Try-On via Misalignment-Aware Normalization"
IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2021, Virtual, Accepted
- C5** T. Kim*, C. Chung*, **S. Park***, G. Gu, K. Nam, W. Choe, J. Lee and J. Choo. "K-Hairstyle: A Large-scale Korean Hairstyle Dataset for Virtual Hair Editing and Hairstyle Classification"
IEEE International Conference on Image Processing (ICIP), 2021, Anchorage, USA, Accepted
- C6** K. Kim*, **S. Park***, J. Lee, J. Lee, S. Kim, J. Choo, and E. Choi. "Continuous-Time Video Generation via Learning Motion Dynamics with Neural ODE"
British Machine Vision Conference (BMVC), 2021, Virtual, Accepted
- C7** J. Lee*, J. Yun*, **S. Park**, Y. Kim, and J. Choo. "Improving Face Recognition with Large Age Gaps by Learning to Distinguish Children"
British Machine Vision Conference (BMVC), 2021, Virtual, Accepted

- C8** C. Chung*, T. Kim*, H. Nam*, S. Choi, G. Gu, **S. Park**, and J. Choo. "HairFIT: Pose-invariant Hairstyle Transfer via Flow-based Hair Alignment and Semantic-region-aware Inpainting"
British Machine Vision Conference (BMVC), 2021, Virtual, Accepted as Oral Presentation
- C9** K. Kim*, **S. Park***, J. Lee*, S. Chung, J. Lee, and J. Choo. "AnimeCeleb: Large-Scale Animation CelebHeads Dataset for Head Reenactment"
European Conference on Computer Vision (ECCV), 2022, Tel Aviv, Accepted
- C10** S. Lee*, G. Gu*, **S. Park**, S. Choi, and J. Choo. "High-Resolution Virtual Try-On with Misalignment and Occlusion-Handled Conditions"
European Conference on Computer Vision (ECCV), 2022, Tel Aviv, Accepted
- C11** C. Chung*, T. Kim*, Y. Kim*, **S. Park**, K. Kim, and J. Choo. "Style Your Hair: Latent Optimization for Pose-Invariant Hairstyle Transfer via Local-Style-Aware Hair Alignment"
European Conference on Computer Vision (ECCV), 2022, Tel Aviv, Accepted

WORKSHOP PAPERS

- W1** S. Kim*, **S. Park***, S. Chung*, J. Lee, Y. Lee, H. Kim, Mr Prabhat, and J. Choo. "Focus and track: pixel-wise spatio-temporal hurricane tracking"
ICML 2019 Workshop Climate Change: How Can AI Help?, 2019, California, USA
- W2** S. Kim*, **S. Park***, S. Chung*, J. Lee, Y. Lee, H. Kim, Mr Prabhat, and J. Choo. "Learning to Focus and Track Hurricanes"
NIPS 2019 Workshop Tackling Climate Change with Machine Learning, 2019, Vancouver, Canada
- W3** **S. Park***, K. Kim*, S. Kim*, J. Lee, J. Lee, J. Lee, and J. Choo. "Hurricane Nowcasting with Irregular Time-step using Neural-ODE and Video Prediction"
ICLR 2020 Workshop Tackling Climate Change with Machine Learning, 2020, Virtual, Accepted as Spotlight

PREPRINTS

- P1** **S. Park***, S. Chung*, J. Lee, and J. Choo. "Character-Level Long-Tailed Distribution in Scene Text Recognition"
Under review

Work Experience

Qualcomm AI Research

RESEARCH INTERN (EXPECTED)

- TBD

Seoul, S.Korea

Aug. 2022 - Feb. 2023.

Kakao Enterprise

MEMBERSHIP PROGRAM

- Long-Tailed Classification, Scene Text Recognition

Pangyo, S.Korea

Jul. 2021 - Dec. 2021.

Kakao Enterprise

RESEARCH INTERN

- Long-Tailed Classification, Scene Text Recognition

Pangyo, S.Korea

Mar. 2021 - Jun. 2021

Data and Visual Analytics Lab, Korea University

UNDERGRADUATE RESEARCHER

- Hurricane tracking
- Polyp detection with SSD (Single Shot Multi-box Detector)
- Brain stroke onset time classification with ResNet-3D model

Seoul, S.Korea

Jul. 2018 - Aug. 2019

- Instagram data analysis with object detection and clustering

Teaching Experience

AI WORKSHOP INSTRUCTOR

- **KAIST ML Engineer BootCamp**, instructing Machine Learning, Computer Vision, May.2022 - Jun. 2022
- **ISEF Mentor**, instructing Virtual Try-On, Feb. 2022. - Apr. 2022
- **FastCampus**, (The RED) instructing GAN, Nov. 2021.
- **SAIT**, (ML / DL Action Learning) instructing Computer Vision, Sep. 2021 - Oct. 2021.
- **SK Telecom**, (Big Tech Academy, AI Course) instructing Computer Vision, Sep. 2021.
- **Global Startup Academy**, instructing Computer Vision & Kaggle Competition, Dec. 2020 - Feb. 2021.
- **SK Telecom**, instructing Image generation, Sep. 2020.
- **Samsung DS KAIST** (AI Expert Program), instructing Image-to-Image translation, Oct. 2020.
- **Samsung DS KAIST** (AI Expert Program), instructing NLP, Oct. 2019.
- **Samsung DS KAIST** (AI Expert Program), instructing Computer Vision, Aug. 2019.

TEACHING ASSISTANT

- **[AI599] Special Topics in Machine Learning : Deep Learning and Real-world Applications**, Mar. 2022 - Jun. 2022.
- **[AI604] Deep Learning for Computer Vision**, Sep. 2021 - Dec. 2021.
- **[AI604] Deep Learning for Computer Vision**, Sep. 2020 - Dec. 2020.
- **[AI602] Advanced Deep Learning**, Mar. 2020 - Jun. 2020.

Grant and Award

AWARD

- 2017 Qualcomm Innovation Award, Mar. 2018.
- Microsoft AI for Earth (ICLR Workshop Paper **[W3]**), May. 2020.
- 2021 Qualcomm Innovation Fellowship (AAAI Paper **[C3]**), Nov. 2021.
- 2021 Korean Artificial Intelligence Association, Best Paper Award (BMVC Paper **[C8]**).
- 2022 Korean Artificial Intelligence Association, Best Paper Award (ECCV Paper **[C9]**)

References

Jaegul Choo

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Associate Professor

KAIST

Joonseok Lee

JOONSEOK2010@GMAIL.COM

Assistant Professor

Seoul National University, Google Research

Edward Yoonjae Choi

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Assistant Professor

KAIST