

# Sunghyun Park

AI RESEARCHER

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## Research Interest

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Computer Vision, Neural-ODE

## Education

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### M.S. 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

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### 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**

### 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** 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"  
**Under review**
- P2** Y. Kim\*, J. Lee\*, **S. Park**, H. Lee, and J. Choo. "Missing one child is one too many: Improving face representation of children for finding missing children"  
**Under review**
- P3** 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"  
**Under review**

## Work Experience

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### Data and Visual Analytics Lab, Korea University

Seoul, S.Korea

#### UNDERGRADUATE RESEARCHER

Jul. 2018 - Aug. 2019

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

### Daumsoft

Seoul, S.Korea

#### INTERN

Jan. 2018 - Feb. 2018

- Instagram data analysis with object detection and clustering

## Teaching Experience

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#### AI WORKSHOP INSTRUCTOR

- **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

- **[AI604] Deep Learning for Computer Vision**, Sep. 2020 - Dec. 2020.
- **[AI602] Advanced Deep Learning**, Mar. 2020 - Jun. 2020.

## Grant and Award

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#### AWARD

- 2017 Qualcomm Innovation Award, Mar. 2018.

## References

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**Jaegul Choo**  
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*Associate Professor*  
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