

# Jae Shin Yoon

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## EDUCATION

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- **Ph.D. University of Minnesota (UMN), USA** 2017 - present
  - Major : Computer Science
  - Advisor : [Prof. Hyun Soo Park](#)
- **M.S. Korea Advanced Institute of Science and Technology (KAIST), Korea** 2015 - 2017
  - Major : Robotics Engineering
  - Advisor : [Prof. In So Kweon](#)
  - GPA: 3.66/4.3 (92.88 %)
- **B.E. Hanyang University, Korea** 2009 - 2015
  - Major : Electrical Engineering
  - Advisor : [Prof. Yong Ho Song](#)
  - GPA: 4.08/4.5 (94.6 %) (Summa Cum Laude)
- **Exchange student. Kobe University, Japan** 2012/04 - 2013/02

## EXPERIENCE

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- **Facebook Reality Labs, Oculus, Pittsburgh** 2018/06 - 2018/08
  - Advisor: [Dr. Takaaki Shiratori](#), [Dr. Shoou-I Yu](#)
  - Researched monocular 3D face tracking using Convolutional Neural Networks.
- **Korea Institute of Science and Technology (KIST), Korea** 2017/03 - 2017/08
  - Advisor: [Dr. Sang Chul Ahn](#), [Dr. Hwasup Lim](#)
  - Researched computer vision algorithm, especially focusing on 3D model texturing.
    - :: MRF based face-aware 3D model texturing for natural face textures.
    - :: Poisson based graph-wise inpainting for color hole filling.
    - :: High-resolution image registration to low-resolution Kinect image using perspective n points.
- **Samsung Electronics, Korea** 2016/01 - 2017/02
  - Advisor : [Prof. In So Kweon](#)
  - Researched machine learning based autonomous vehicle vision system.
    - :: All data (lane, traffic sign, road marking, and vanishing point) processing, generating, and managing for network input and ground-truth label.
    - :: Involved in designing multi-tasking network architecture.
  - Related publication : “*VPGNet: Vanishing Point Guided Network for Lane and Road Marking Detection and Recognition*” (ICCV 2017)

## TEACHING

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- CSCI 2033, Linear Algebra Teaching Assistant at UMN 2017/09 - 2017/12

## PUBLICATION

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- **International Publication**

- **Jae Shin Yoon**, Ziwei Li, Hyun Soo Park. “3D Semantic Trajectory Reconstruction from 3D Pixel Continuum”, *IEEE Computer Vision and Pattern Recognition (CVPR 2018)*
- Yukyung Choi, Namil Kim, Soonmin Hwang, Kibaek Park, **Jae Shin Yoon** and In So Kweon, “KAIST Multi-spectral Day/Night Dataset for Autonomous and Assisted Driving”, *Transaction on Intelligent Transportation System (T-ITS)*
- **Jae Shin Yoon**, Francois Rameau, Junsik Kim, Seokju Lee, Seunghak Shin and In So Kweon. “Pixel-Level Matching for Video Object Segmentation using Convolutional Neural Networks” *IEEE International Conference on Computer Vision (ICCV 2017)*
- Seokju Lee, Junsik Kim, **Jae Shin Yoon**, Seunghak Shin, Oleksandr Bailo, Namil Kim, Tae-hee Lee, Hyun Seok Hong, Seung-Hoon Han, and In So Kweon. “VPGNet: Vanishing Point Guided Network for Lane and Road Marking Detection and Recognition” *IEEE International Conference on Computer Vision (ICCV 2017)*
- Oleksandr Bailo, Seokju Lee, Francois Rameau, **Jae Shin Yoon**, and In So Kweon. “Robust Road Marking Detection and Recognition using Density-Based Grouping and Machine Learning Techniques.” *IEEE Winter Conference on Applications of Computer Vision (WACV 2017)*
- **Jae Shin Yoon**, Kibaek Park, Soonmin Hwang, Namil Kim, Yukyung Choi, Francois Rameau and In So Kweon. “Thermal-Infrared based Drivable Region Detection”, *IEEE Intelligent Vehicle Symposium (IV 2016)*.
- Yukyung Choi, Namil Kim, Kibaek Park, Soonmin Hwang, **Jae Shin Yoon** and In So Kweon “All-Day Visual Place Recognition: Benchmark Dataset and Baseline”, *IEEE Computer Vision and Pattern Recognition Workshop 2015 on Visual Place Recognition in Changing Environments (CVPR-VPRICE 2015)*
- Soonmin Hwang, Yukyung Choi, Namil Kim, Kibaek Park, **Jae Shin Yoon** and In so Kweon “Low-Cost Synchronization for Multispectral Cameras”, *IEEE International Conference on Ubiquitous Robots and Ambient Intelligence (URAI 2015)*
- Namil Kim, Yukyung Choi, Soonmin Hwang, Kibaek Park, **Jae Shin Yoon** and In So Kweon “Geometrical calibration of multispectral calibration”, *IEEE International Conference on Ubiquitous Robots and Ambient Intelligence (URAI 2015)*

- **Domestic Publication**

- **Jae Shin Yoon**, Donghyeon Cho, Kibeak Park, Jinsun Park and In So Kweon “Video Stabilization using Spline based Ideal path” *28<sup>th</sup> Workshop on Image Processing and Image Understanding (IPIU)*, Feb 2016

## REVIEWER

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- *Computer Vision and Pattern Recognition (CVPR)*, 2018 IEEE
- *Asian Conference on Computer Vision (ACCV)*, 2018 IEEE
- *Transaction on Multimedia*, 2018 IEEE
- *Intelligent Vehicle Symposium (IV)*, 2016 IEEE

## HONORS & AWARDS

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- Summa Cum Laude, Hanyang University (**GPA**: 4.08/4.5) (94.6 %) 2015/02
- Scholarship, Hanyang Brain scholarship (\$1,440) 2014
- Prize for the top first percentile GPA, Hanyang University (\$3,740) 2013/09
- Miraeasset Park Hyeon-Joo foundation scholarship for exchange student (\$8,565) 2012
- Qualcomm Scholarship for outstanding engineer, Qualcomm corp (\$3,740) 2011

## OTHER SKILL

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- **Language**
  - Korean, English, Japanese
- **Programming Language**
  - C, C++, MATLAB, Python, LaTeX