Younghwa Jung

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EDUCATION

- **Seoul National University, Seoul** *2015 - Present*
  Ph.D candidate in Department
  of Electrical Engineering and Computer Science.
- **Kyungpook National University, Daegu** *2008 - 2015*
  B.S in Electronics Engineering.
- **Budapest University of Technology and Economics, Budapest** *2013 - 2014*
  B.S in Telecommunication and Media Informatics.

RESEARCH INTERESTS

- Self-Driving Car
  - Curb Detection and Tracking.
- Deep learning architectures for 3D data (point clouds and volumetric grids)
  - 3D Object Detection.
  - 3D Shape Completion.
- Motion planning for Autonomous Vehicles
  - Trajectory Prediction.

RESEARCH EXPERIENCE

- **Multi-agent Networks Laboratory**, Pennsylvania State University, USA *Sep 2019 - Present*
  - Visiting Researcher (Advisor : Prof. Minghui Zhu)

PROJECTS

- **Development of Human-level Driving Intelligence for Autonomous Driving of Unmanned Vehicles** *2018 - Present*
  - Funded by National Research Foundation of Korea.
- **Urban Autonomous Driving by 'SNUVI' Platform** *2017 - 2018*
  - Development of Curb detection and Tracking Module.
- **Intelligent Vehicle IT Research Center** *2015 - 2016*
  - Project 2015 : Map-building, Localization and Recognition for autonomous driving at SNU.
  - Development of Loop-closure Detector for SLAM.
  - Funded by National Research Foundation & Ministry of Science, ICT & Future planning
- **Development of Driver Assistant System Using Camera, Radar and Road Characteristics** *2015 - 2016*
  - Funded by Mando Cooperation & Ministry of Knowledge Economy.

SKILL

- **Coding** : C, C++, Python
- **Deep Learning Framework** : Tensorflow, Pytorch
- **Others** : Robot Operating System(ROS)

TEACHING AND TALK

TA : Basic Mathematics and Programming Practice for Machine Learning, SNU *Spring, 2019*
TA : Session about Mapping for Autonomous Driving Vehicles, SNU [Material] *May 21, 2016*

PUBLICATION

- Journal:

  1. **Younghwa Jung**, Seung-Woo Seo, and Seong-Woo Kim, "Curb Detection and Tracking in Low-Resolution 3D Point Clouds based on Optimization Framework," accepted to IEEE Transactions on Intelligent Transportation Systems, 2019 [Video] IF: 5.744.

- Conference :

  1. **Younghwa Jung** and Seong-Woo Kim, "3D Scene Attentional Upsampling for Autonomous Driving", Conference on X+Artificial Intelligence (**XAICON**), 2019.
  2. **Younghwa Jung** , Mingu Jeon, Chan Kim, Seung-Woo Seo, and Seong-Woo Kim, "Fast Curb Detection based on a Single-Shot Point Cloud with Cue Points Using Deep Neural Networks",submitted to International Conference on Robotics and Automation, 2020.