MinYoung Chang

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Education

Columbia University • New York City, NY   Aug. 2020 – Dec. 2021 (Expected)
Masters of Science in Computer Science

Cornell University • Ithaca, NY   Aug. 2014 – Aug. 2019
Bachelor of Science in Mechanical Engineering, Cum Laude

Fields of Interest

Robotic Perception, Computer Vision, Deep Learning

Publication

- SpoxelNet: Spherical Voxel-based Deep Place Recognition for 3D Point Clouds of Crowded Indoor Spaces
  Minyoung Chang, Suyong Yeon, Suhyun Ryu, Donghwan Lee
  IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2020)

Work Experience

Graduate Student Intern | Clova AI, Seongnam, Korea   May. 2020 – Aug. 2020

- Implemented a deep learning-based lane detection algorithm for road images of urban areas with high traffic
- Managed a data annotation team for labeling large complicated datasets

Graduate Student Intern | NAVER LABS, Seongnam, Korea   Sep. 2019 – Apr. 2020

- Developed a place recognition detection algorithm for an indoor mapping robot with VLP-16 LiDAR sensors
- Preprocessed large, messy 3D point cloud data of VLP-16 LiDAR sensors
- Developed an algorithm that rapidly removes moving objects in a series of 3D point cloud data

Research Assistant | Cornell Autonomous Systems Lab, Ithaca, NY   Jan. 2019 – Aug. 2019

- 3D SLAM using LiDAR, ZED stereo camera, and JACKAL robot
- Developed reinforcement learning simulation for driving a miniature car
- Implemented YOLO object detection algorithm for a miniature self-driving car
- Vision-based object tracking with YOLO and ZED stereo camera
- Sensor fusion simulation with LiDAR and RADAR using extended Kalman Filter
- Vision-based lane detection algorithm for a self-driving car
- Deep learning algorithm for image classification

Research Assistant | Cornell HRC^2 Lab, Ithaca, NY   June 2018 – Dec. 2018

- Rapid Prototyping of robot hardware
- Participated in various human-robot interaction researches
- Beta-tested artificial intelligence based modeling program from Autodesk – Generative Design

Additional Experience

Sergeant | ROK Army Special Forces, Sweihan, United Arab Emirates   July 2016 – Apr. 2018

- Participated in ROK-UAE Special Warfare and Counter-Terrorism Joint Trainings
- Interpreted Weekly Joint Staff Meetings and Daily Mission Brief
- In charge of external relations and communication with UAE Ministry of Defense and Special Warfare Command

Technical Skills

- Programming languages: Python (TensorFlow, Keras, Pytorch), C++, ROS, MATLAB
- Languages: English(fluent), Korean(native), Spanish(intermediate)