Min Young Chang

814 Amsterdam Ave Apt 6L, New York, NY, 10025
minyoung.info • mc4962@columbia.edu • 917-704-7995
linkedin.com/in/minyoung-chang

Education

Columbia University | New York, NY — Aug 2020 - Expected Dec 2021
MS in Computer Science

Cornell University | Ithaca, NY — Aug 2019
BS in Mechanical Engineering, Cum Laude

Technical Skills

Programming : Python (PyTorch, TensorFlow, Keras), C++, MATLAB, ROS

Work Experience

Graduate Research Intern | Clova AI, Seongnam, Korea — May 2020 - Aug 2020

- Implemented a deep learning-based lane detection algorithm (PyTorch)
- Achieved 81.1% recall rate and 94.8% precision rate for road images of urban areas with high traffic
- Managed a data annotation team for labeling a large complicated Korean road data set

Graduate Research Intern | NAVER LABS, Seongnam, Korea — Sep 2019 - Apr 2020

- Researched on place recognition for an indoor mapping robot with VLP-16 LiDAR sensors (TensorFlow)
- Achieved over 98% recall rate for place recognition at a crowded department store
- Accomplished 3X accuracy and 2X recall rate of the SOTA place recognition algorithms
- Wrote a conference paper as first author, and was accepted to IEEE IROS 2020
- Pre-processed large, messy 3D point cloud data of VLP-16 LiDAR sensors
- Proposed and developed an innovative method to remove moving objects in a series of 3D point cloud data

Research Assistant | Cornell Autonomous Systems Lab, Ithaca, NY — Jan 2019 - Aug 2019

- Worked on 3D SLAM using LiDAR, ZED stereo camera, and JACKAL robot through Python and ROS
- Led a reinforcement learning simulation project for driving a miniature car as a Control Team leader
- Implemented YOLO detection on a miniature car and accomplished 70% IoU as a Detection Team member
- Simulated an extended Kalman Filter for sensor fusion of LiDAR and RADAR (C++)
- Developed a vision-based lane detection algorithm for a self-driving car (Python, OpenCV)

Research Assistant | Cornell HRC^2 Lab, Ithaca, NY — Jun 2018 - Dec 2018

- Designed and prototyped robot hardware with Inventor, 3D printers, and laser cutters
- Participated in various human-robot interaction researches
- Beta-tested artificial intelligence-based modeling program from Autodesk – Generative Design

Publication

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

Additional Experience

Sergeant | ROK Army Special Forces, Sweihan, United Arab Emirates — Jul 2016 - Apr 2018

- Participated in joint trainings of Special Warfare and Counter-Terrorism with UAE Special Forces
- Conducted and 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