# 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

## 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

**Researcher | NAVER LABS**, Seongnam, Korea                                     Sep. 2019 – Apr. 2020

- The first author of "SpoxelNet: Spherical Voxel-based Deep Place Recognition in 3D Point Clouds of Crowded Indoor Spaces" (IEEE/RSJ IROS 2020, under review)
- Preprocessed large, messy 3D point cloud data of VLP-16 LiDAR sensors
- Developed an algorithm that rapidly removes moving objects in 3D point clouds

**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)