

EDUCATION

- Korea Advanced Institute of Science and Technology (KAIST)** Seongnam, South Korea
• *M.S. candidate in Artificial Intelligence; Advised by Professor Jaegul Choo* Sep. 2020 –
GPA: 4.2 / 4.3 (9.89 / 10.0)
- Korea University** Seoul, South Korea
• *Bachelor of Computer Science and Engineering* Mar. 2013 – Aug. 2019
GPA: 3.7 / 4.5 (9.09 / 10.0); Major GPA: 4.11 / 4.5 (9.13 / 10.0)

RESEARCH INTEREST

Scene segmentation for autonomous vehicles and robots

Motion planning and control

My research interest lies in the intersection of two areas; computer vision and robotics. On my way to the ultimate goal of building autonomous vehicles and robots that can convey valuable experiences to society, I tackled the problems of domain generalization and out-of-distribution detection on semantic segmentation while doing my Master's program in KAIST AI. I hope these skills can be effectively integrated with my work experiences at BearRobotics. As a robotics software engineer, I and my team built a safe velocity controller, depth camera extrinsic calibration system, auto-testing infrastructure, and odometry testing framework.

PUBLICATIONS

- **S. Jung***, J. Lee*, D. Gwak, S. Choi, and J. Choo (*: equal contributions) "Standardized Max Logits: A Simple yet Effective Approach for Identifying Unexpected Road Obstacles in Urban-Scene Segmentation", International Conference on Computer Vision (ICCV), 2021, **Accepted as Oral presentation** 3% acceptance rate.
- S. Choi*, **S. Jung***, H. Yun, J. Kim, S. Kim, and J. Choo (*: equal contributions) "RobustNet: Improving Domain Generalization in Urban-Scene Segmentation via Instance Selective Whitening" IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2021, **Accepted as Oral Presentation**, 4.1% acceptance rate.
- J. Choi, **S. Jung**, D. Park, J. Choo, and N. Elmqvist. "Visualizing for the Non-Visual: Deep Learning to Enable Visually Impaired to Use Visualization" Computer Graphics Forum (CGF), 2019 (Proc. **EuroVis'19**), 31% acceptance rate.

PATENTS

- Method, System, and Non-Transitory Computer-Readable Recording Medium for Controlling a Robot, **S. Jung**, H. Leinhos, F. Lee, and I. Liu. (**US Patent in Progress**)
- Method, System, and Non-Transitory Computer-Readable Recording Medium for Controlling Movement of a Robot, B. Pong, H. Leinhos, **S. Jung**. (**US Patent in Progress**)

WORK EXPERIENCE

- **Bear Robotics Korea** Seoul, South Korea
Robotics Software Engineer Apr. 2019 – Jul. 2020
 - **Safe Velocity Controller**: We designed this safety controller to prevent accidents, especially when people control the robots with remote controllers.
 - **Auto-testing Simulation Infrastructure**: As a part of the integration testing, I built the dockerized framework that automatically runs the robot simulation testing and reporting the results to the users.
- **Bear Robotics** Redwood City, CA, US
Robotics Software Engineer Intern Jul. 2018 – Mar. 2019
 - **Depth Camera Extrinsic Calibration**: This project is designed to calibrate the extrinsics of depth cameras. We implemented this project by using the C++ PCL library and ROS1.
 - **Odometry Testing Framework**: I conducted this project to check the performance of the robot localization and the accuracy of the odometry.

PROGRAMMING SKILLS

- **Languages:** Python, C++ **Technologies:** Pytorch, Linux, Docker, Robot Operating System (ROS1)

ACTIVITIES

- **Invited Talk at Hyundai Motor Group AI Research Seminar** *Jul. 2021*
Gave a presentation about my paper, RobustNet.
- **Linux GPU Server Maintainer** *Sep. 2020 -*
Currently managing Linux GPU servers in DAVIAN Lab. We built a monitoring and auto-reporting system to check all the servers we have using Linux shell scripts and python.