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Seoul, Republic of Korea

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Myung-Hwan Jeon

EDUCATION

Korea Advanced Institute of Science and Technology (KAIST) *Feb. 2023*
Ph.D in Robotic Program
Dissertation: "Ambiguity-Aware Multi-Object Pose Optimization toward Visually-Assisted Robot Manipulation"
Advised by Dr. Ayoung Kim and Dr. Jee-Hwan Ryu

Korea Advanced Institute of Science and Technology (KAIST) *Feb. 2020*
M.S. in Robotic Program
Dissertation: "Learning-Based Object Detection and 6D Pose Estimation toward Vision-Based Underwater Robotic Grasping"
Advised by Dr. Ayoung Kim

Kwangwoon University *Feb. 2017*
B.S. in Division of Robotics(Information Control)

POSITIONS

Post-Doctoral Research Fellow *Jan. 2023 -*
Robust Perception and Mobile Robotics (RPM) Lab
Dept. of Mechanical Engineering (ME)
Seoul National University (SNU)

Graduate Student Teaching Assistant *Sep. 2022 - Dec. 2022*
AIME: Advanced Topics in Mechanical Engineering 4
Dept. of Mechanical Engineering (ME)
Seoul National University (SNU)

Graduate Student Teaching Assistant *Sep. 2019 - Dec. 2019*
CE554: Mechanival Design of Civil Robot
Dept. of Civil and Environmental Engineering (CEE)
Korea Advanced Institute of Science Technology (KAIST)

Researcher *Mar. 2017 - Jan. 2018*
The Congnitive and Collaborative Robotics Group
Center of Human-centered Interaction for Coexistence (CHIC)

FIELD OF INTEREST

Robot Vision, Robotic Perception, 6D Object Pose Estimation, Visual simultaneous localization and mapping (SLAM), 6D Localization, Computer Vision

PUBLICATIONS

International Journal

- **Myung-Hwan Jeon**, Jeongyun Kim, Jee-Hwan Ryu, and Ayoung Kim, "Ambiguity-Aware Multi-Object Pose Optimization for Visually-Assisted Robot Manipulation", in IEEE Robotics and Automation Letters (RA-L), 2022.
- Eon-ho Lee, Byungjae Park, **Myung-Hwan Jeon**, Hyesu Jang, Ayoung Kim and Sejin Lee, "Data augmentation using image translation for underwater sonar image segmentation", in PLoS ONE 17(8), 2022.
- Joowan Kim, **Myung-Hwan Jeon**, Younggun Cho, Ayoung Kim, "Dark Synthetic Vision: Lightweight Active Vision to Navigate in the Dark", in IEEE Robotics and Automation Letters (RA-L), 2021.
- **Myung-Hwan Jeon** and Ayoung Kim, "PrimA6D: Rotational Primitive Reconstruction for Enhanced and Robust 6D Pose Estimation", in IEEE Robotics and Automation Letters (RA-L), 2020.

International Conference

- Dong-Guw Lee, **Myung-Hwan Jeon**, Younggun Cho, and Ayoung Kim, "Edge-guided Multi-domain RGB-to-TIR image Translation for Training Vision Tasks with Challenging Labels ", in IEEE International Conference on Robotics and Automation (ICRA), 2023.
- Seungsang Yun, Minwoo Jung, Jeongyun Kim, Sangwoo Jung, Younghun Cho, **Myung-Hwan Jeon**, Giseop Kim, and Ayoung Kim, "STheReO: Stereo Thermal Dataset for Research in Odometry and Mapping", in IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2022
- Eon-Ho Lee, **Myung-Hwan Jeon**, Hyesu Jang, Byungjae Park, Ayoung Kim, and Sejin Lee, "Study on the Training Effectiveness of Deep Learning with Synthesized Underwater Sonar Image Using Pix2Pix and FCN", in IEEE/OES Autonomous Underwater Vehicles Symposium (AUV), 2020.
- Jun-Sik Kim, **Myung-Hwan Jeon**, and Jung-Min Park, "Multi-Hand Direct Manipulation of Complex Constrained Virtual Objects", in IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2019.
- **Myung-Hwan Jeon**, Yeongjun Lee, Young-Sik Shin, Hyesu Jang, and Ayoung Kim, "Underwater Object Detection and Pose Estimation using Deep Learning", in 12th IFAC Conference on Control Applications in Marine Systems, Robotics, and Vehicles (CAMS), 2019.

Domestic Journal

- Jeongyun Kim,**Myung-Hwan Jeon**, and Ayoung Kim, "Enhancing Single Thermal Image Depth Estimation via Multi-Channel Remapping for Thermal Images", in Journal of Korea Robotics Society (KROS), 2022.
- **Myung-Hwan Jeon**, Yeongjun Lee, Young-Sik Shin, Hyesu Jang, Taekyeong Yeu, and Ayoung Kim, "Synthesizing Image and Automated Annotation Tool for CNN based Under Water Object Detection", in Journal of Korea Robotics Society (KROS), 2019.

Dissertations

- **Myung-Hwan Jeon**, Ambiguity-Aware Multi-Object Pose Optimization toward Visually-Assisted Robot Manipulation. PhD thesis, Korea Advanced Institute of Science Technology (KAIST), 2022.
- **Myung-Hwan Jeon**, Learning-Based Object Detection and 6D Pose Estimation toward Vision-Based Underwater Robotic Grasping. Master's thesis thesis, Korea Advanced Institute of Science Technology (KAIST), 2020.

Etc

- **Myung-Hwan Jeon** and Ayoung Kim, "Measuring Prediction Reliability on 6D Object Pose Estimation", in Late-Breaking Results Poster on IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2022.
- **Myung-Hwan Jeon**, Yeongjun Lee, Young-Sik Shin, Hyesu Jang, and Ayoung Kim, "Deep Learning Based Underwater Object Detection and Pose Estimation", in Workshop on IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2018.

AWARDS AND HONORS

· **Best Paper Award**, 2023 Korea Robot Society (KROS).
· **Top Award**, 2017 Nowon-gu, Seoul Capstone Design Contest.
· **Excellence Prize**, 5th Kwangwoon Software Programming Contest.
· **Excellence Prize**, 12th Kwangwoon IT Exhibition.
· **Special Prize**, 18th Korea Intelligent Robot Contest.
· **Encouragement Prize**, 18th Korea Intelligent Robot Contest
· **Top Award**, 2015 Nowon-gu, Seoul Capstone Design Contest.
· **Top Award**, 17th Korea Intelligent Robot Contest.
· **Chairman's Award**, Texas Instrument (TI) Innovation Challenge: 2013 Korean MCU Design Contest.
· **BMW Special Prize**, 2013 Hanyang University Intelligent Model Car Racing.

SERVEICES

Reviewer

· IEEE International Conference on Robotics and Automation (ICRA, 2023)
· IEEE Robotics and Automation Letters (RA-L, 2022)
· IEEE International Conference on Intelligent Robots and Systems (IROS, 2022)
· IEEE International Conference on Robotics and Automation (ICRA, 2022)
· IEEE International Conference on Robotics and Automation (ICRA, 2021)
· IEEE International Conference on Ubiquitous Robots (UR, 2020)

LANGUAGES & SKILLS

- Korean, English
- C/C++, Python, MATLAB, PyTorch, TensorFlow, Solidworks
- Microsoft Office, Ubuntu, Windows, LaTeX