

CONTACTS	<p><i>E-Mail:</i> dhk6869@gmail.com <i>Cell Phone:</i> (346)-247-8113</p> <p><i>Website:</i> dokkev.github.io <i>Github:</i> dokkev</p>
EDUCATION	<p>Northwestern University, Evanston, IL, USA Master of Science in Robotics, expected in December 2021</p> <p>Saint Louis University, St.Louis, MO, USA Bachelor of Science in Mechanical Engineering, May 2020</p>
RESEARCH/ PROJECTS	<p>Whisker-based Tactile Mapping and Localization <i>Northwestern University 03/2021 - 12/2021</i></p> <ul style="list-style-type: none"> • Simulated rat's active whisker sensing over divergent objects shapes with C++ and obtained collision, force, and moment data using multiprocessing • Implemented and trained whisker-based real-time shape classifiers using PyTorch for mapping and localization of objects • Integrated autonomous whisker-based sensing and navigation algorithm using Deep Q-Learning <p>Autonomous Fire Fighting Robot Arm <i>Northwestern University 12/2020 - 08/2020</i></p> <ul style="list-style-type: none"> • Manipulated HDT Adroit robot arm to pick up and operate a fire extinguisher autonomously using ROS Moveit • Implemented sensing and locating of fire in Rviz using thermal imaging, depth imaging, and pointcloud <p>UAV Navigation Using Vision Based Landmark Recognition <i>Saint Louis University 06/2019 - 05/2020</i></p> <ul style="list-style-type: none"> • Trained a real time object detector with Tensorflow to recognize different landmarks on SLU campus • Integrated webcam into a quadcopter drone to implement vision feedback based control system
INTERNSHIP	<p>Research Assistant Intern <i>HQ Tech Daejeon, South Korea 05/2017 - 08/2017</i></p> <ul style="list-style-type: none"> • Operated UAVs to measure the flux and quality of water in the reservoirs • Presented water flux measuring UAV design at R&D Special Zone Technology Exposition at Daejeon Convention Center • Assisted in the design and execution of testing and analysis of precise water gauges using computer vision <p>Micah Senior Intern <i>Micah Program St.Louis, MO 07/2019 - 05/2020</i></p> <ul style="list-style-type: none"> • Planned community night events and retreats for first-year students in the Micah Program • Trained student group leaders with other senior interns • Reached out and recruited perspective students to Micah Program
TECHNICAL SKILLS	<p>Advanced: C/C++, Python, ROS, Git, Ubuntu, Unit Testing</p> <p>Moderate: MATLAB, Creo, Abaqus, Jekyll, PLC, \LaTeX</p> <p>Novice: Ansys, Java, Go, TIG Welding</p>

RESEARCH INTERESTS	<p>Bio-Inspired Robotics/Sensors</p> <p>Dynamics and Control</p> <p>Robotic Manipulation</p> <p>Tactile Sensing</p>
TEACHING EXPERIENCE	<p>Mechanical Engineering Lab Teaching Assistant <i>Saint Louis University 01/2020 - 05/2020</i></p> <ul style="list-style-type: none"> • Instructed ME Lab (MENG 3001) of 20+ students and evaluated assignments and lab reports • Demonstrated and organized the impact testing and axial flow experiments <p>Academic Tutor <i>Firm Foundation Tutoring Program 09/2016 - 03/2020</i></p> <ul style="list-style-type: none"> • Worked on course syllabi, study guides, assessments, and other additional documents that assist students in the grades of 4 to 9 for their academic success • Taught Physical Science, and Algebra, Writing composition (grammar), Reading literature
HONORS AND AWARDS	<p>Grand Challenges Scholar, National Academy of Engineering, 2020</p> <p>Parks College Innovation Challenge 1st Place, Saint Louis University, 2018</p> <p>Dean's List, Saint Louis University, 2018</p>
ACTIVITIES	<p>Northwestern University Korean Student Association <i>Executive Board Member 09/2020 - Current</i></p> <ul style="list-style-type: none"> • Organized remote networking events for Korean graduate students at NU • Assisted Industries in Korea to connect with graduate students at NU for recruitment <p>Saint Louis University Climbing Team <i>Lead Climber 08/2017 - 03/2020</i></p> <ul style="list-style-type: none"> • competed in climbing competitions in Midwestern Region <p>New Day Pops <i>Guitarist, Audio Engineer 09/2017 - 06/2019</i></p> <ul style="list-style-type: none"> • Alternative Rock Band played at bars and private events in St.Louis • Released an EP 'Sorry for Spitting'
LANGUAGE SKILLS	<p>English: Fluent (resided in US for 10 years)</p> <p>Korean: Native</p> <p>Chinese: Can read and write</p>