

CONTACTS	<p><i>E-Mail:</i> dongho@utexas.edu  <i>Portfolio:</i> dokkev.github.io</p> <p><i>Cell Phone:</i> (314)-934-6288  <i>Github:</i> dokkev</p>
EDUCATION	<p><b>University of Texas at Austin</b>, Austin, TX, USA  PhD in Mechanical Engineering, Currently Enrolled</p> <p><b>Northwestern University</b>, Evanston, IL, USA  Master of Science in Robotics, December 2021</p> <p><b>Saint Louis University</b>, St.Louis, MO, USA  Bachelor of Science in Mechanical Engineering, May 2020</p>
RESEARCH/ PROJECTS	<p><b>Visuotactile Perception for Humanoids</b>  <i>University of Texas at Austin</i>   01/2023 - current</p> <ul style="list-style-type: none"> <li>• Integrated tactile sensors to <b>humanoid</b> feet and trained contact information</li> <li>• Implemented multimodal perception which can estimate tactile information from computer vision and vice versa</li> </ul> <p><b>Whisker-based Tactile Sensing and Shape Classifier</b>  <i>Northwestern University</i>   03/2021 - 12/2021</p> <ul style="list-style-type: none"> <li>• Simulated rat's active whisker sensing over divergent objects shapes with <b>C++</b> and obtained collision, force, and moment data using <b>multiprocessing</b></li> <li>• Implemented and trained whisker-based <b>real-time shape classifiers</b> using <b>Tensorflow</b>.</li> <li>• Integrated sensing algorithm which adjusts rat's orientation by <b>Deep Q-Learning</b> to improve real-time classification accuracy</li> </ul> <p><b>Autonomous Fire Fighting Robot Arm</b>  <i>Northwestern University</i>   12/2020 - 08/2020</p> <ul style="list-style-type: none"> <li>• Manipulated HDT Adroit robot arm to pick up and operate a fire extinguisher autonomously using <b>ROS</b> and <b>Moveit</b></li> <li>• Implemented sensing and locating of fire in Rviz using <b>thermal imaging</b>, <b>depth imaging</b>, and <b>pointcloud</b></li> </ul>
INTERNSHIP	<p><b>Research Assistant Intern</b>  <i>HQ Tech</i>   <i>Daejeon, South Korea</i>   05/2017 - 08/2017</p> <ul style="list-style-type: none"> <li>• Operated <b>UAVs</b> to <b>measure the flux and quality</b> of water in the reservoirs</li> <li>• Presented water flux measuring UAV design at R&amp;D Special Zone Technology Exposition at Daejeon Convention Center</li> <li>• Assisted in the design and execution of <b>testing and analysis</b> of precise water gauges using <b>computer vision</b></li> </ul> <p><b>Micah Senior Intern</b>  <i>Micah Program</i>   <i>St.Louis, MO</i>   07/2019 - 05/2020</p> <ul style="list-style-type: none"> <li>• Planned community night events and retreats for first-year students in the Micah Program</li> <li>• Trained student group leaders with other senior interns</li> <li>• Reached out and recruited prospective students to Micah Program</li> </ul>
TECHNICAL SKILLS	<p><b>Programming Languages:</b> C, C++, Python, MATLAB/Simulink, Java, MELFA-BASIC</p> <p><b>Operating System:</b> Linux, ROS</p> <p><b>Machine Learning:</b> Tensorflow, PyTorch, Scikit-learn</p> <p><b>Mechantronics:</b> PIC32, Raspberry Pi, Arduino, PLC, PCB (EAGLE)</p> <p><b>CAD/FEA:</b> Creo, Abaqus, Ansys, Solidworks</p> <p><b>Other:</b> L<sup>A</sup>T<sub>E</sub>X, CMake, OpenCV, OpenGL, Moveit, BulletPhysics, RT Toolbox2, Ableton</p>

TEACHING EXPERIENCE	<b>Mechatronics Lab (ME 140L) TA</b> <i>University of Texas at Austin   08/2022 - 12/2022</i> <b>Mechanical Engineering Lab (MENG 3001) TA</b> <i>Saint Louis University   01/2020 - 05/2020</i>	
	<b>Academic Tutor</b> <i>Firm Foundation Tutoring Program   09/2016 - 03/2020</i> <ul style="list-style-type: none"> <li>• 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</li> <li>• Taught Physical Science, and Algebra, Writing composition (grammar), Reading literature</li> </ul>	
HONORS AND AWARDS	<b>Grand Challenges Scholar</b> , National Academy of Engineering, 2020 <b>Parks College Innovation Challenge 1st Place</b> , Saint Louis University, 2018 <b>Dean's List</b> , Saint Louis University, 2018	
ACTIVITIES	<b>Northwestern University Korean Student Association</b> <i>Executive Board Member   09/2020 - 12/2021</i> <ul style="list-style-type: none"> <li>• Organized remote networking events for Korean graduate students at NU</li> <li>• Assisted Industries in Korea to connect with graduate students at NU for recruitment</li> </ul> <b>Saint Louis University Climbing Team</b> <i>Lead Climber   08/2017 - 03/2020</i> <ul style="list-style-type: none"> <li>• competed in climbing competitions in Midwestern Region</li> </ul> <b>New Day Pops</b> <i>Guitarist   09/2017 - 06/2019</i> <ul style="list-style-type: none"> <li>• Alternative Rock Band played at bars and private events in St.Louis</li> <li>• Mixed audio for live stages and studio recording</li> <li>• Released an EP 'Sorry for Spitting'</li> </ul>	
RELEVANT COURSEWORK	Robotic Manipulation Sensing, Navigation, and ML Advanced Mechatronics	Embedded Systems in Robotics Biomedical Robotics Soft Robotics
LANGUAGE SKILLS	English: Native Korean: Native Chinese: Can read and write	