

YOUNGJAE MIN

77 Massachusetts Avenue, Cambridge, MA 02139, USA
youngj0@mit.edu
<https://youngjae-min.github.io>

INTERESTS	Designing and analyzing autonomous systems, machine learning, optimization, control	
EDUCATION	Massachusetts Institute of Technology	Cambridge, MA
	Master Student in Dept. of Aeronautics and Astronautics Advisor: Professor Navid Azizan	From Sep. 2021
	Korea Advanced Institute of Science and Technology	Daejeon, Korea
	B.S. in Electrical Engineering and Mathematical Sciences GPA: 4.1/4.3 (<i>summa cum laude</i>)	Mar. 2014 - Feb. 2020* (*include two years of military service)
RESEARCH EXPERIENCE	Perception, Planning, Inference PI: Prof. Han-Lim Choi	Feb. 2019 - July 2021
	<i>Laboratory for Information and Control Systems, Dept. of Aerospace Eng., KAIST</i>	
	<ul style="list-style-type: none">◦ Mapped 3-D dynamic occupancy in real-time from LiDAR data [C1]◦ Planned mobile sensor networks with uncertainty under GPS-denied environments through combined Bayesian filters, PF and EKF [C2]◦ Proposed online learning and planning of partially observable dynamical systems via variational inference on Gaussian process models [J1]◦ Planned non-myopic paths of mobile sensors for multi-target tracking by adopting distributed optimization, ADMM [J2]	
	Provable Neural Network Classifier PI: Prof. Hye Won Chung	Mar. 2018 - Jan. 2019
	<i>Inference and Information for Data Science Lab, Sch. of Electrical Eng., KAIST</i>	
	<ul style="list-style-type: none">◦ Designed neural network classifiers that generalize to separable distributions through saturation of sigmoid activation function [C3]	
	Vital Sign Monitoring PI: Prof. Fadel Adib	June 2018 - Sep. 2018
	<i>Signal Kinetics Group, Media Lab, MIT</i>	
	<ul style="list-style-type: none">◦ Built real-time blood flow measurement system from scratch using mmWave radar technology	
	Indoor Localization PI: Prof. Sung-Ju Lee	June 2017 - Feb. 2018
	<i>Networking & Mobile Systems Lab, Sch. of Computing, KAIST</i>	
	<ul style="list-style-type: none">◦ Estimated indoor person location through channel information from commodity Wi-Fi devices	
PUBLICATIONS	Conference Proceedings	
	1. Y. Min , D. Kim, H. Choi "Kernel-Based 3-D Dynamic Occupancy Mapping with Particle Tracking" <i>IEEE International Conference on Robotics and Automation (ICRA)</i> , Xi'an, China, June 2021	
	2. Y. Min , S. Park, H. Choi [arXiv: 1909.11046] "Informative Planning of Mobile Sensor Networks in GPS-Denied Environments" <i>AIAA Science and Technology Forum and Exposition (SciTech GN&C)</i> , Orlando, USA, Jan. 2020	
	3. Y. Min and H. W. Chung [arXiv: 1904.09109] "Shallow Neural Network can Perfectly Classify an Object following Separable Probability Distribution," <i>IEEE International Symposium on Information Theory (ISIT)</i> , Paris, France, July 2019	

4. S. Kim, **Y. Min**, Y. H. Kim
"Measurements of sliding friction forces under ultrasonic oscillations: out-of-plane oscillations"
IEEE International Ultrasonics Symposium (IUS), Chicago, USA, Sep. 2014
5. G. Yun, K. Kim, Y. Roh, **Y. Min**, J. Lee, Y. H. Kim
"Comparison of slowness curves of Lamb wave with elastic moduli and crystal structure in silicon wafers," *IEEE International Ultrasonics Symposium (IUS)*, Prague, Czech Republic, July 2013

Journal Articles

1. S. Park, Y. Park, **Y. Min**, H. Choi [[arXiv: 1903.08643](#)]
"Online Gaussian Process State-Space Model: Learning and Planning for Partially Observable Dynamical Systems"
International Journal of Control, Automation and Systems 20 (2022): 601-617
2. S. Park*, **Y. Min***, J. Ha, D. Cho, H. Choi (*equally contributed) [[arXiv: 1807.11068](#)]
"A Distributed ADMM Approach to Non-Myopic Path Planning for Multi-Target Tracking"
IEEE Access 7 (2019): 163589-163603
3. **Y. Min**, G. Yun, K. Kim, Y. Roh, Y. H. Kim
"Comparison of slowness profiles of Lamb wave with elastic moduli and crystal structure in single crystalline silicon wafers"
Journal of the Korean Society for Nondestructive Testing 36 (2016): 1-8

HONORS & AWARDS	2020 Global Leadership Award, <i>KAIST</i>	2020
	KAIST Presidential Fellowship, <i>KAIST</i>	2014 - 2020
	Dean's List, <i>College of Engineering, KAIST</i>	Fall'14, Spring'15, Spring'17, Spring'19
	GE Foundation Scholar-Leaders Program, <i>Fulbright / GE Foundation</i>	2015 - 2019
	Undergraduate Student Scholarship, <i>Korea Foundation for Advanced Studies</i>	2015 - 2019
	Army Commendation Medal, <i>United States Department of the Army</i>	2017
TEACHING EXPERIENCE	PH141 General Physics I, Tutor, <i>KAIST</i>	Spring'15, Spring'17
	KAIST Global Institute for Talented Education, Online Tutor, <i>KAIST</i>	Aug. 2014 - July 2015
EXTRACURRI- CULARS	KAIST EE Newsletter, Reporter, <i>KAIST</i>	Mar. 2017 - Dec. 2017
	ROK Army & U.S. Army, IT Specialist (Sergeant, KATUSA), <i>Cp. Carroll</i>	July 2015 - Apr. 2017
	The Real LUNATIC, B-Boy, <i>KAIST</i>	Mar. 2014 - July 2015
SKILLS	Programming	C/C++, Python, Pytorch, ROS, CUDA
	Languages	Korean (native), English (TOEFL iBT 108/120, GRE Verbal 159/170)