DUC-NHAT LUONG

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OBJECTIVE

Ph.D. candidate in Robotics at Tokyo Institute of Technology, Japan with 1-year experience as a Back-End Developer in Vietnam, seeking internship roles in Software Engineering for Robotics.

EDUCATION

Ph.D. of Systems and Control Engineering, Tokyo Institute of Technology, Japan — Expected 2024

Master of Systems and Control Engineering, Tokyo Institute of Technology, Japan — 2020 - 2022

Bachelor of Mechatronics Engineering, Hanoi University of Science and Technology, Vietnam — 2014 - 2019

SKILLS

Technical Skills	ROS, C++, Python, MySQL, Docker, Microcontroller, CAD
Technology	Navigation, SLAM, Reinforcement Learning, Search algorithms, IoT system
Soft Skills	Critical Thinking, Vietnamese, English, Japanese
Project manager	Trello, Version Control (Git)

EXPERIENCE

Researcher — September 2020 - now
Tokyo Institute of Technology — *Tokyo, Japan*

- Using reinforcement learning to learn the odor search strategy of the silk moth to apply on robot.
- Developed an algorithms switching framework for odor source localization.
- Built Gas Distribution Map (GDM) using a mobile robot.

Back-End Developer — October 2019 - September 2020
Giao Hang Tiet Kiem (GHTK, JSC) — *Hanoi, Vietnam*

- Developed real-time data-assisted system on package handling, work shifts for workers, truck drivers.
- Designed and constructed conveyor systems for the package sorting process.

Research Assistant — March 2019 - May 2019
National Taiwan University of Science and Technology — *Taipei, Taiwan*

- Integrated sensor modules to Automated Guided Vehicles (AGV) in warehouses.
- Designed path planning algorithm for AGV in ROS.

Mechanical Engineer (intern) — June 2018 - August 2018
DKS Production and Trading Company Limited — *Hanoi, Vietnam*

- Constructed 3D models of mechanical and electronic components using CAD.

PUBLICATIONS

- **Luong, Duc-Nhat**, and Daisuke Kurabayashi. 2023. "Odor Source Localization in Obstacle Regions Using Switching Planning Algorithms with a Switching Framework" *Sensors* 23, no. 3: 1140. doi
- **Luong, Duc-Nhat**, and Daisuke Kurabayashi. 2022. "Switch planning algorithms for odor source localization in obstacle region based on the entropy gain rate of information" *The Joint symposium AROB-ISBC-SWARM 2022* January 25 - 27, 2022.