





EDUCATION

Melbourne, Australia	Monash University	07/2022-Now
<ul style="list-style-type: none">• PhD Candidate – Full scholarship from Department of Data Science & Artificial Intelligence.• Researching on low-level autonomous perception tasks (detection, tracking, and navigation) using Deep neural networks.		
Melbourne, Australia	Monash University	03/2020-11/2021
<ul style="list-style-type: none">• Master of Data Science, First-class honours (WAM 82/100).		
Seoul, Korea	Hankuk University of Foreign Studies	07/2016-12/2016
<ul style="list-style-type: none">• Representative of Vietnam National University as an exchange student.		
Ho Chi Minh city, Vietnam	International University- VNU	2015-2019
<ul style="list-style-type: none">• Major in Business Management- Business Administration. 2 times receiving encouragement scholarship for being at the top 10% of the Faculty of Business.		
Ho Chi Minh city, Vietnam	Pho Thong Nang Khieu – Highschool for the gifted – VNU	2012-2015
<ul style="list-style-type: none">• Bronze medal at HCMC excellent student contest (Biology).		

PUBLICATIONS

	Project page
<ul style="list-style-type: none">• Le, D. T., Pham, T., Cai, J., & Rezatofighi, H. (2025). Marginalized Generalized IoU (MGIoU): A Unified Objective Function for Optimizing Any Convex Parametric Shapes. arXiv preprint arXiv:2504.16443. <i>Under review</i>	ldtho.github.io/MGIoU
 <ul style="list-style-type: none">• Le, D. T., Shi, H., Cai, J., & Rezatofighi, H. (2024). DiffUSER: Diffusion Model for Robust Multi-Sensor Fusion in 3D Object Detection and BEV Segmentation. <i>ECCV 2024</i>.	ldtho.github.io/DiffUSER
 <ul style="list-style-type: none">• Le, D. T.*, Gou, C.*, Datta, S., Shi, H., Reid, I., Cai, J., & Rezatofighi, H. (2024). JRDB-PanoTrack: An Open-world Panoptic Segmentation and Tracking Robotic Dataset in Crowded Human Environments. <i>CVPR 2024</i>.	jrdp.erc.monash.edu/dataset/panotrack
 <ul style="list-style-type: none">• Vendrow, E.*, Le, D. T.*, & Rezatofighi, H. (2022). JRDB-Pose: A Large-scale Dataset for Multi-Person Pose Estimation and Tracking. <i>CVPR 2023</i>.	jrdp.erc.monash.edu/dataset/pose
 <ul style="list-style-type: none">• Le, D. T., Shi, H., Rezatofighi, H., & Cai, J. (2022). Accurate and Real-time 3D Pedestrian Detection Using an Efficient Attentive Pillar Network. <i>IEEE Robotics and Automation Letters (RA-L 2022)</i>.	github.com/ldtho/PiFeNet (* equal contribution)

TECHNICAL EXPERIENCES

Languages and Technologies:

- Knowledgeable in: Computer Vision, Generative Model, Deep learning, 2D/3D object detection and tracking, Pytorch (proficient), Tensorflow (intermediate), MySQL, Machine learning algorithms, Numpy, Pandas, PySpark.
- Python (proficient) SQL (basic), R (intermediate), Spark (intermediate), Tableau (basic).

Proficient with Microsoft Office (Word, Excel, Access, PowerPoint).

Monash University

10/2021-07/2022

Role: Research Assistant

- Under the supervision of [Professor Jianfei Cai](#) and [Dr. Hamid Rezatofighi](#)
- Work on 3D object detection neural networks
- Propose [PiFeNet](#), a novel 3D real-time object detector which achieved state-of-the-art performance in detecting pedestrian on KITTI and JRDB dataset.

Monash Medical Centre

04/2021-now

Role: Casual Research Officer

- Under the supervision of [Professor Peter Ebeling](#) and [Professor Jianfei Cai](#).
- Researching on attention mechanisms (multi-head attention, coordinate attention, etc.) and their application in X-ray images disease classification task.
- Developing a new attention-guided neural network used in detecting atypical femur fractures from X-ray images.

Monash Motorsport

03/2020-now

Role: Autonomous system engineer (autopilot perception)

- Researching and building state-of-the-art real-time 3D object detection architecture using in lane and track detecting for **Formula 1 racing cars**.
- Proposing Pillar Feature Net (named PiFeNet) neural network for track racing line detection from point-cloud data gathered from Velodyne and Baraja LiDAR mounted on the car, the model is trained and tested on KITTI and our in-house racing track datasets.
- Applying YOLO-v4 for cones detecting from images which pipelined from 2 parallel cameras.
- Ensuring both neural networks meet Formula Student Germany regulations

Datamart Solutions

04/2018-10/2018

Role: Data engineer

- Participate in data ETL (extract-transform-load) processes.
- Develop and maintain crawlers, parsers system which crawls data from e-commerce websites (Lazada.vn, Tiki.vn, Shopee.vn,...).
- Research and implement data collection/management tools from various sources.
- Documenting system architecture and data management processes at a detailed level.

Teaching Assistant

International University- VNU

01/2018-06/2018

Course: Calculus II

- Helping professor Nguyen Dinh (Head of Mathematics Department) in score grading (exams and assignments) and supporting students in mathematics.
- Linear algebra, Multivariable calculus, Differential, Derivatives, Matrix, Graph,...

