

TRAN VAN CHIEN

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RESEARCH INTERESTS

My research interest lies in implementing machine learning models that can understand visual information, reasoning, and extracting knowledge from a series of frames to help robots work effectively in complex dynamic environments. Additionally, I'm also fond of motion planning and path planning algorithms and SLAM (Simultaneous localization and mapping). Currently, my work focuses on how to make those planning algorithms more adaptive by combining them with Deep Learning techniques.

EDUCATION

9/2019 - 12/2023

University of Engineering and Technology - Vietnam National University
Undergraduated Student of Robotics Engineering

RESEARCH EXPERIENCE

8/2022 - present

University of Rochester, Newyork

Research Assistant

- Supervisor: PhD. Student Nguyen Manh Nguyen - **Google Scholar**, **Letter of Recommendation**
- Work on Visual Counting and Scene-Text-Spotting problems

8/2020 - 1/2022

Department of Robotic Engineering, UET-VNU

Research Assistant

- Supervisor: Assoc. Prof. PhD. Xiem Hoang Van - **Google Scholar**
- Learning about Solidworks.
- Learning about OpenCV, Machine Learning & Deep Learning: **Repository**.
- Having experience with how to use Raspberry Pi Mouse. Implementing some of the recognition techniques like using voice to control movement, and tracking with color: **Youtube Video**.
- Having experience with ROS1. Implementing SLAM technique (Hector, Gmapping) and navigation based on that by Raspberry Pi Mouse: **ROS.pdf**, **Youtube Video**.
- Learning about Reinforcement Learning Lecture at UET: **RLQuadruped.pdf**.

2020

CS50's Introduction to Artificial Intelligence with Python

Self-Learning

- Starting approach to AI as an experience

INDUSTRIAL EXPERIENCE

7/2022 - 9/2022	Koh Young Technology Inc. Vietnam <i>Internship</i> <ul style="list-style-type: none">• Supervisor: PhD. Tuan Anh Nguyen - LinkedIn• Image Stitching by just Computer Vision, have no Deep Learning or Machine Learning technique. The dataset is provided by Koh Young, which is images of sub-circuit. The progress reached 60% overall.
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PROJECTS

1/2023 - present	Multi-UAVs Path Planning on Point Cloud <i>Final Thesis</i> <ul style="list-style-type: none">• Using some algorithms on multi-UAVs for obstacle avoidance while flying to a specific destination indoor like a warehouse or factory on Point Cloud• Tools: MATLAB, Python
6/2022 - 12/2022	UAV Path Planning on Point Cloud <i>Self-Learning</i> <ul style="list-style-type: none">• Reconstructing an area of the environment by Point Cloud and generating a trajectory for UAV flies based on Point Cloud data as input: Path Planning on Point Cloud• Tools: MATLAB, C/C++
1/2022 - 4/2022	3D Bounding Box Estimation Using Both Camera and LIDAR <i>Self-Learning</i> <ul style="list-style-type: none">• How to use the camera 2D and LIDAR to reconstruct 2D views of the object into 3D: Complex-YOLOv4-Pytorch• Tools: Python, OpenCV, Pytorch, Scikit learn
10/2021 - 3/2022	Reinforcement Learning for a Traffic Control application <i>Research Assistant</i> <ul style="list-style-type: none">• Using Reinforcement Learning to decide which light will be turned on, it means which road will be opened and vehicles can go through: Traffic Light Control• Tools: MATLAB, Python

TECHNICAL SKILLS

Programming Languages: Python, C/C++

Software Packages & Tools:

- Software Packages: Linux, ROS1, GIT, MATLAB, SolidWorks, Maple, Gazebo, LATEX
- Machine Learning: Pytorch, Keras, Scikit learn
- Computer vision: OpenCV
- Data engineering: Pandas, Matplotlib, Numpy

Hardware Platform: Embedded program on Nano JetsonTX2, Raspberry Pi, Arduino

ACTIVITIES

1/2023 - 2/2023	National Robotics Championship <i>Support Associate</i> <ul style="list-style-type: none">• STEAM for Vietnam Foundation• Head Referee
8/2022 - 9/2022	National Robotics Tournament <i>Support Associate</i> <ul style="list-style-type: none">• STEAM for Vietnam Foundation• Scorekeeper Referee Lead
12/2021	The 24th REV-ECIT <i>Support Associate</i>