PHAN THANH DANH

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Thu Duc, Ho Chi Minh City, Vietnam
Date of Birth: November 17, 2000

EDUCATION

Bachelor of Engineering in Computer Engineering September 2018 - September 2022
Ho Chi Minh City University of Technology and Education
GPA: 7.97/10 - 3.16/4
Thesis: 9.8/10 (Self-driving Golf Car using Deep Learning and Multisensor Fusion)

REWARDS & HONORS

- **Best Paper Award** in The International Workshop on Intelligent Systems (First author) . 08.2022
- **Best Student Paper Award** in the 6th International Conference on Green Technology and Sustainable Development (First author) . 06.2022
- **Top 3** AWS Build on Vietnam, 2021 National Finale. . 09.2021

. Solve problems of companies using Amazon Web Services

- **Top 8/over 100** of National Digital Race- " Driverless", hosted by FPT Corporation and the Vietnam Television (VTV). 12.2020

. Simulate, debate related methods, optimize, and deploy algorithms on a 1/7 car model.

- Participate in **final round** in UIT Car Racing 2020. 09.2020

. Simulate a self-driving car using visual clues to achieve checkpoints.

RESEARCH EXPERIENCE

Student Leader at Intelligent System Laboratory 11.2020 - Present
Ho Chi Minh City University of Technology and Education, Vietnam

· Manage research activities to exchange knowledge related to AI.
· Host weekly seminars with Lab's Directors and lectures.
· Support, and provide training for academic contests at the university.
· Assist Seniors (Ph.D. and Master students) to complete their thesis with several simple tasks.

Contestant in "Digital Race 2019-2020: Driverless" Competition 09.2019 - 12.2020
FPT Corporation and Vietnam Television

· Used image processing and deep learning techniques for lane and traffic sign detection.
· Controlled a virtual autonomous car using Robot Operating System (ROS).
· Deployed algorithms to 1/7 car model.

Undergraduate Research Projects 11.2020 - Present
Research of Interest: Autonomous Vehicle, Smart Traffic Systems, Computer Vision

· **Sophomore:**

. Leader of the SPK-TWOLAB team and got the Top 8 of the National Digital Race- " Driverless". Videos: *Video 1* and *Video 2*

· **Junior:**

. Implement small projects for subjects: Designing an app, a website, embedding systems (RTOS, Linux).

. Designing a solution for companies using available AWS engines and winning Top 3 AWS (Amazon Web Services) Build on Vietnam, 2021 National Finale.
Video: *Video*

· **Senior:**

. Project: A Method Between Vehicle Counting and Motion Estimation for Traffic Congestion Identification.

- Using double RANSAC with multiple variables of traffic status to identify levels of traffic congestion
- Writing academic journal (Preparing to submit)

. Thesis: Self-driving Golf Car using Deep Learning and Multisensor Fusion (9.8/10).

- Constituting mechanical ideas for converting a golf car to an autonomous one comprising of dismantling details to plan a reasonably mechanical design.
- Finding solutions to enhance perceptions of a self-driving car.
- Writing international academic papers.
  Video1: *Video 1* and Video2: *Video 2* and Video3: *Video 3*

* There are some intuitive mini-projects that are listed on my own website:

- Github: https://github.com/Oliverbihop?tab=repositories
- Youtube: https://bit.ly/ThanhDanh
- Website: https://bit.ly/ThanhDanhsites

SKILLS

Technical and Computers Skills	Embedding programming: Arduino, STM32, Jetson TX2. Operating System: Windows, Linux (Ubuntu). Programming Language: Python, C/C++.
Framework &library	Tensorflow, Pytorch, Scikit-learn, OpenCV
Language Proficiency	English: IELTS 6.5. Reading and writing technical, academic documents.

PUBLICATION

[1] **Thanh-Danh Phan**, Minh-Thien Duong, and My-Ha Le "A Fusion Method Between Vehicles Counting and Motion Estimation for Traffic Congestion Identification". (Preparing to submit).
[2] Tran-Nhat-Minh Ta*, **Thanh-Danh Phan***, and My-Ha Le "A Light-weight Multitask Model Utilizing Mutual Features ", 2023 International Conference on System Science and Engineering, July 2023. (Under review).
[3] **Thanh-Danh Phan***, Tan-Thien-Nien Nguyen*, Minh-Thien Duong, Chi-Tam Nguyen, Hong-Phong Ly, and My-Ha Le "Sensor Fusion of Camera and 2D LiDAR for Self-Driving Automobile in Obstacle Avoidance Scenarios", 2022 The International Workshop on Intelligent Systems, August 2022. **(Best Paper Award)**
[4] **Thanh-Danh Phan***, Tan-Thien-Nien Nguyen*, Minh-Thien Duong, Chi-Tam Nguyen, Hoang-Anh Le, and My-Ha Le "A Steering Strategy for Self-Driving Automobile Systems Based on Lane-Line Detection", 2022 6th International Conference on Green Technology and Sustainable Development, July 2022. **(Best Student Paper Award)**.

[5] Minh-Thien Duong, **Thanh-Danh Phan**, Nghe-Nhan Truong, Manh-Cuong Le, Truong-Dong Do, Van-Binh Nguyen, and My-Ha Le "An Image Enhancement Method for Autonomous Vehicles Driving in Poor Visibility Circumstances", 2022 6th International Conference on Green Technology and Sustainable Development, July 2022.

[6] **Thanh-Danh Phan**, Hoang-Hai-Nam Nguyen, Ngoc-Hien-Duc Le, Thanh-Sang Nguyen, Minh-Thien Duong, and My-Ha Le "Steering Angle Estimation for Self-driving Car Based on Enhanced Semantic Segmentation ", 2021 International Conference on System Science and Engineering, August 2021.

*** These authors contributed equally to the papers.**

REFERENCES

1. Le My Ha
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