# Huy Phan Nhat

### ELECTRICAL ENGINEERING AND COMPUTER SCIENCE DEPARTMENT

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#### ABOUT ME

Frameworks and Tools Pytorch 1.0+, Keras, Scikit-Learn, Pandas, Tensorflow 2.0+

Technical Skills Python, Arduino, LATEX

Languages Fluent in English, Basic in Spanish Interests Basketball, Reading, Photography

#### TEAM-WORK AND LEADERSHIP EXPERIENCE

# Phan Science and Technology Club

Vice-president

Vinh, Vietnam (March 2019 to now)

- Managing and maintaining the activities of the club like conducting products and articles
- Helping and mentoring freshers in doing research and making data-driven products
- Leading teams to participate in science competitions

### Nghe An Science Exhibition

Vice-president

Vinh, Vietnam (Summer 2019)

- Leading a content team to perform various science experiments from mathematics to chemistry
- Managing the activities during preparations of the exhibition
- Raising funds and finding sponsors for the exhibition (up to 15 millions VND)

### Shoppe Code League

Team Lead

Vinh, Vietnam (Present)

- Preparing the tools and updating the news from Shoppe for the team
- Planning and dividing specific tasks to each member in the team
- In charge of completing the Data Science challenges

# Competitions and Personal Projects

#### STEME Vinuni competition

(July 2019)

- Creating a product that can solve environmental problem using stem-related knowledge.
- First prize (1/20 teams) with the solution named "New Traffic Light" reducing the wasted time and fuel at traffic intersection
- Using and fine-tuning the pre-trained MobileNet SSD to track traffic flows. Then using a mathematical model Webster to identify the most optimized time distribution for traffic light system. All the computations were done on Raspberry Pi 3 with the help of Movidius Stick 2 (USB GPU)

## Intelligent Trash Can

(August 2019)

- Leading a team in the science club to develop an automatic trash can that has ability to classify 4 kinds of trash into separated containers. This product can help the recycle process to be completed quicker
- Using customized CNN model and training it on the self-collected dataset
- The accuracy archives 92 percents on the validation set and 82 percents in the real world using Raspberry Pi 4 as the main computation device

## Tropical Disease Surveillance and Forecasting in Vietnam

(May 2020 to present)

- The resulted research paper will be submitted to the Science for the Future Fair
- Using multi-source data including environmental variables, medical records, weather pattern, media, ... as the training dataset
- The current forecasting model (under testing) are Random Forest for tabular data and LSTM for sequence data like media text

#### Searching Films Tool

(April 2020 to present)

- The final product is a website that can search the name of a film based on the description of the user
- Under the hood of the website is an algorithm including 2 parts: The Natural Language Processing part and Querry part. The NLP model will compute the similarity between input text and movie plot dataset then the Querry part will find the most suitable films

## Hanoi Open Mathematical Competition

(January 2018)

- Solving a series of mathematical problems and illustrate the solutions in English. Competing with more than 1000 participants from 10 countries and 3 regions of Vietnam
- Bronze medal with the rank of 210/1000

# National Mathematics Competitions for Students and Pupils

(April 2018)

- Given two topics of mathematics relating to Combinations and Algebra, researching about the applications of them. Finally completing a series of problems under limited time
- Bronze Medal with rank of 71/210

#### **EDUCATION**

# Phan Boi Chau Specialized High School

(2017-2020)

- Top 5 in entry examination
- 9.0 GPA in 11 grade

### VinUniversity

(2020-2023)

- Merit-based scholarship
- Electrical Engineering Major

Couresra

(2019 to present)

- Convolutional Neural Network Course (deeplearning.ai)
- Sequence Models course (deeplearning.ai)
- Mathematics for Machine Learning (Imperial College London)
- Machine Learning (Andrew Ng)