# DINH TRAC DUC ANH

undergraduate Computer Science student

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Ho Chi Minh City, Viet Nam

## Short Resume

**Undergraduate student**, Faculty of Computer Science and Engineering, Ho Chi Minh City University of Technology (HCMUT), Ho Chi Minh City, Viet Nam 2023–present

**First year - Computer Science**

As a child, I was impressed by the way a computer could lead me to the world of video games. After writing the first program at the age of 14 with Pascal, a new world opened in front of my eye, of how people could create many things with their imaginations. Computer has been the main reason why I chose Computer Science as my major.

The new journey began after I passed the entrance test and was recognized as a student of Ho Chi Minh City University of Technology, working on group projects has enhanced my teamwork and communication skills. By delving into personal projects (see personal projects section below) I've gained several valuable skills in programming generally.

At the end of 2023, I was recruited as an amateur researcher at HCMUT VNPT lab, engaging under the lead of seniors and Assoc. Prof. Quan Thanh Tho. Although many boundaries ahead, with passion and dedication I'll overcome them and gain even more valuable knowledge.

## Programming languages and tools

Skilled in python3 specifically, C, and C++, familiar with LaTeX, Google Colab, Anaconda and Jupyter Notebook. Also familiar with machine learning libraries such as tensorflow and ultralytics.

## Interested fields

Artificial Intelligence, Machine Learning, Deep Learning, Computer Vision.

## Personal projects

**Tuberculosis bacteria detection using YOLOv8** 2024

This project was conducted to apply a deep learning model (CNN) to detect bacteria from a given image of a patient's sputum. The aim of this project was to find an effective way to detect all the bacteria that exist in the image accurately.

The project has been through 2 periods of time. The previous approach was trying to crop some region samples of bacteria and environments from training images to feed the CNN model. Through the training process, the CNN model could classify a particular region from an image containing tuberculosis bacteria or not. However, this approach proved to be cumbersome. After realizing the limit, the new approach was to find an image detection algorithm or newer deep learning models, we've found that YOLOv8 could be potential for this project. More information is collected via this **github repository**.

**Pneumonia classification using Convolutional Neural Networks** 2024

In this project, I implemented a CNN using the TensorFlow library to classify chest X-ray images into two categories: normal and pneumonia. The dataset used in this project was the Kaggle Chest X-ray Images (Pneumonia) dataset.

The CNN was trained using the Adam optimizer and the binary cross-entropy loss function. The model was trained for 10 epochs, and the best model was selected based on the validation accuracy. The performance of the CNN model was evaluated on the test set. The model achieved an accuracy of 98% on the test set. This is a promising result. Information about the project is stored in this **github repository**

**Diabetics prediction using Logistic Regression model** 2023–2024

This research project is inspired respectfully by the book by associate professor Tho Quan, "Mang No Ron Nhan Tao Tu Hoi Quy Den Hoc Sau". However, the project focuses on explaining and implementing the Logistic Regression algorithm without building any neural network for the sake of simplicity and consistency. This research delves into the potential of Logistic Regression to accurately predict diabetes based on readily available data, potentially paving the way for more accessible and reliable diagnoses. Although the model was trained relatively on a small dataset but could gain a promising accuracy on the test set of 80%. More information in this **github repository**

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## Education

**Undergraduate student:** Faculty of Computer Science and Engineering, Ho Chi Minh City University of Technology (HCMUT), Ho Chi Minh City, Vietnam — 2023

**Undergraduate student**, Vietnam National University Ho Chi Minh City, Ho Chi Minh City, Vietnam — 2023

## Certifications

**Test of English for International Communication (TOEIC), score: 860/990, provided by IIG** — 2023

**CS50X2023 Introduction to Computer Science, provided by Harvard Online** — 2023

**Supervised Machine Learning: Regression and Classification provided by Stanford Online, Deeplearning.AI** — 2023

**Python 101 for Data Science provided by IBM** — 2023

**Machine Learning with python provided by IBM** — 2024

## Languages

**English**: Working proficiency

**Vietnamese**: Mother tongue

## Personal interests

Computer, Coding, Technology, Teamwork.

## Contact


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