# TO VU TRONG

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## Education

2020 - 2025 **Electronics and Telecommunications Engineer**, *Faculty of Electronics and Telecommunication*, University of Danang - University of Science and Technology, Danang.
- Major: Computer Engineering
- Degree Classification: Good

## Work Experience

August 2024 - Now **Computer Engineer**, University of Danang - University of Science and Technology, Danang.
Subjects: Machine Learning, Deep Learning, Artifical Intelligence, Data Structures and Algorithms, Advanced Computer Architecture, Cognitive Systems.
**AI Student Responsibilities and Daily Activities::**
- Develop and improve object detection models
- Work on data classification and clustering projects
- Apply Machine Learning, Deep Learning algorithms for various tasks
- Process and analyze large datasets for model training and evaluation

## My Projects

**URL** My Github's Source Repositories

August 2024 **Object Detection and Recognition System Development using Faster R-CNN**.
- Built Faster R-CNN model with MobileNetV3 backbone for object detection on Pascal VOC dataset
- Processed input images (reading, resizing, and normalizing) to ensure compatibility with the model, converting them into the appropriate tensor format
- Used a pre-trained model with default COCO weights and fine-tuned it on custom data to improve detection accuracy on the target task

June 2024 **Football Player Detection using YOLOv5**.
- Collect sports video data and annotation files. Process video data from folders containing sports videos and annotation files in JSON format
- Create and manage input data folders for training and testing YOLO models
- Convert bounding box coordinates from pixel format to normalized scale for YOLO
- Train and test for object recognition model, improve efficiency and accuracy

September 2023 **Brain Tumor Segmentation using DeepLabPlus, U-Net**.
- Collect data images and annotations file. Visualization data and data processing
- Developed U-Net and DeepLabV3+ models for brain tumor segmentation with custom architecture
- Pre-processed and augmented image data to enhance model performance
- Implemented dropout and batch normalization to optimize the model and prevent overfitting
- Enhanced segmentation accuracy through hyperparameter tuning and model evaluation

February 2023 **Brain Tumor Segmentation using YOLOv8**.
- Collect data images and annotations file. Visualization data and data processing
- Converted all mask images to YOLO label format to ensure compatibility with the model's input requirements
- Trained the model and deployed it on test datasets for evaluation

NVIDIA Workshop **Fundamentals of Deep Learning**.
Fruit Classification using Convolutional Neural Networks.
- Collected and pre-processed image data for improved model performance
- Optimized architecture and hyperparameters for high accuracy and efficient inference
- Applied data augmentation and model tuning to reduce overfitting and enhance accuracy

## My Certificate of Achievement

**URL** Fundamentals of Deep Learning
**URL** AI/ Machine Learning/ Deep Learning Foundation

## Skills & Background Knowledge

Programming Python, C/C++ Basic, MatLab
Language English: Basic Working Proficiency
Framework Tensorflow, Pytorch, Keras, Scikit-learn, YOLO, Matplotlib, OpenCV, Pandas
S/w & Tools Microsoft office, Latex, Docker, CVAT, Git

## Interests

- Play Sports (Champion of the ETE Cup Football Championship, 2023 and 2024), Listen to music