DAO Duy Manh Ha

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Education

University of Science and Technology of Hanoi (USTH), B.Sc in Information and Communication Technology — Oct. 2021 - Oct. 2024

- **GPA:** *16.00/20.00* (*3.6/4.0*)
- **Coursework:** Computer Science courses (ML, DL, CV, Digital image/signal processing, Algorithms, Probability, etc ...) and Engineering courses (Advanced Python programming, Software engineering, System Analysis & Design).

Experience

Research Internship, ICTLab, USTH — Apr. 2024 - Oct. 2024

- Research several deep learning models for medical images fusion (PET and MRI) using advanced imaging techniques.
- Implement (from scratch) a novel image enhancement method based on traditional techniques such as histogram equalization, noise removal.
- Propose a new pipeline based on the new enhancement technique and deep learning models to synthesize MRI and PET images.
- Enhance edge preservation and structural similarity index from source images to the fused image using the proposed fusion technique.

Projects

Vietnamese OCR — Feb. 2024 - Mar. 2024

- Apply YOLOv8 for text position detection problem in images.
- Then use the VietOCR model for Vietnamese OCR task on text detected by the YOLOv8 model.
- Fine-tune and continue training two models based on Transformer (VGG19 + Transformer) and (VGG19 + Seq2Seq) for text recognition tasks.

ML Models Management — Oct. 2023 - Jan. 2024

- The principle aim is to build, train and run inference several Machine Learning models in order to predict the necessary amount of nutrition for rice plant.
- Do some data pre-processing techniques.

Optical Digital English Character Recognition — Jan. 2024 - Feb. 2024

- Extract characters from documents then apply the KNN model and a simple CNN model in order to recognize those characters.

Bird species & Ant/Bee classification — Oct. 2023 - Nov. 2023

- Build, train, and finetune the ResNet50 model with 80% accuracy for bird species classification and 95% accuracy for ant/bee classification.

Image Denoiser — Jul. 2023

- Do research and implement (from scratch) several methods for noise removal from digital images, then run benchmarks.

Skills

- **Programming:** C/C++, Python, MATLAB.
- **Framworks/Libraries:** Pytorch, Scikit-learn, Numpy, Pandas, OpenCV,...
- **Academy:** Machine learning & Deep learning, Computer vision, Image processing, Algorithms, OOP.
- **Soft skills:** Document research (e.g: reading papers), self-study, teamwork, learning spirit.
- **Others:** Git, Docker, Linux.

Others

- **Foreign Languages:** English (IETLS 7.0), French (B1).