Hong Duc Bui Vinh

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EDUCATION

Bachelor of Mechatronics Engineering Technology Expected, February 2023

University of Technology and Education| Ho Chi Minh City, Vietnam

- GPA: 3.02/4.0

Relevant Coursework:

- Multivariate Calculus, Linear Algebra, Probability and Statistics
- Digital Image Processing and Artificial Intelligence.

Kon Tum Nguyen Tat Thanh High School for the Gifted 2013 - 2018

Physics class - GPA: 8.9/10

AI ENGINEER EXPERIENCE

AI & Software Engineer, Mitek J.S.C | Ho Chi Minh City, Vietnam June 2022 – Present

Texture Synthesis

- Did research on image-to-image translation models and GAN models.
- Built a dataset of face skin from 3 perspectives each sample from metahuman using Unreal Engine 5.
- Used GAN Pix2Pix models to reduce the shine caused by ambient light on the skin, giving the facial skin image in its original state.

Human Motion Capture to Metahuman

- Did research on human motion capture.
- Used Livelink protocol to transfer data from camera to Unreal Engine 5 for real-time metahuman control. (Low-cost, easy-to-use option with input from only 1 common camera).
- Did research to physicalize the metahuman model: stand on the ground, balance, keep back straight,...

AI Engineer Intern, RealTime Robotics | Ho Chi Minh City, Vietnam March – May 2022

- Collected and labeled data from video captured by drone with LabelImg.
- Retrained SSD MobileNet V2, YOLOv5 with Tensorflow API.
- Optimized the models and experimented on JetsonNano, achieving mAP = 42.7, FPS = 20.2.
- Controlled Drone with models and Mission Planner via MAVLink.

PERSONAL PROJECTS

Graduation thesis: Deaf Support System based on AI, Robot Assistant September 2022

- Collected, labeled data, performed exploratory data analysis. Augmented data to increase data diversity and resolve class imbalance.
- Did research on models about human action recognition, text classification: Transformer - Bert, LSTM, I3D...
- Built, trained and evaluated models to achieve best performance.

- Applied the best model to an assistant robot capable of recognizing word-level signs language (the basis for combining words into sentences). Designed a two-way interactive interface between deaf and normal people in real time.

ZALO AI Challenge 2020: Traffic Sign Detection, Object detection November 2020

- Did research on object detection models: SSD, Faster R-CNN, Yolo, ...
- Performed traffic sign detection on Zalo AI Challenge 2020 data set using models from Tensorflow Object Detection API.
- Achieving mAP = 38.6 (YOLOv5) on test set.

CERTIFICATIONS

- *Coursera Machine Learning Stanford* 2021
- *Coursera Deep Learning Specialization (5 of 5 completed)* 2022

TECHNICAL SKILLS

Languages:

- English: TOEIC - 700/990
- Japanese: JLPT - N5

Key Skills:

- Computer Vision Models, Machine Learning Algorithms, Model Development, NLP.
- Data Visualization, Data Analysis.

Technical Skills:

- Programming Language : Python, C.
- Deep Learning Frameworks : Tensorflow, Keras, Pytorch.
- Packages : OpenCV, Pandas, Numpy, Scikit-Learn, Matplotlib, Seaborn, Tkinter.