Phạm Thanh Tùng

Github.com/phamthanhtungbk18 • tungpt185211@gmail.com • 0362105451

Education

Hanoi University of Science and Technology (HUST) Ha Noi, Viet Nam
MECHATRONICS ENGINEERING – Talent Program– GPA: 2.93/4.0 2018 – 2023

Experience

VIETTEL HIGH TECH
Software Development Engineer 6 / 2023 – Present

- Participate in the development, maintenance, and bug fixing of aircraft simulation programs using Qt, QWidget, MQTT, and C++ STL
- Work closely with users to troubleshoot and address issues in production.
- Engage in researching documentation on aviation equipment and the operational principles of devices on aircraft

RTC Vision
Machine Vision Engineer 8 / 2022 – 3 / 2023

- Designing a machine vision system: Selecting and configuring components such as camera, lens, and lighting to ensure requirements for resolution, working distance, and field of view (FOV)
- Implementing, configuring the system, and developing image processing software using vendor software, including product defect detection algorithms and optical character recognition (OCR)

Projects

Automatic system of packing boxes into container applied in Logistics 2 / 2023 – 5 / 2023

- Research the principles of the graph attention layer and the GAT architecture
- Applying Reinforcement Learning, Actor-Critic method to the Online 3D - Bin Packing Problem. Average container fill rate is 75%.
- Develop a control interface program, data visualization features through 3D imagery, a feature for size detection, run deep learning models, and connect to the Dobot robot through the manufacturer's API for object manipulation using Conda, Python

Identification of ripe fruit (tomato) 2022

- Research the fundamental components of a neural network: convolutional layers, multi-layer perceptrons (MLP), loss functions, and optimizers
- Implement two algorithms for classifying tomato images((ripe, nursed, green): transfer learning (pre-trained model is VGG19) and histogram color + SVM
- Collect Images through the ESP32CAM.

Skills & Interests

Programming languages:

- C++ (Qt, STL, Concurrency, Network, TinyXML)
- Python (OpenCV, PyTorch, Numpy)

Theory of machine learning:

- CNN, MLP, GAT, Transformer
- Optimize: SGD, Adam
- Functional: Softmax, Relu, Nll_loss
- Techniques: Fine-tuning, Transfer Learning, Actor-Critic method

Code Tools: Qt Creator, Visual Studio, Visual Studio Code
Build tools: CMake, MSYS2
Control version: Git
Operation system: Window, Linux
Language: Certification Aptis B2
Database: MySql, MongoDB
Other tools: Photoshop, Illustrator