Pham Cong Thuong

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Education

University of Trento GPA: 97/110 — Trento, Italy
Master in Electronics and Robotics — *Sep 2021 - Mar 2024*

Jönköping University (Erasmus Exchange) GPA: 4.8/5 — Jönköping, Sweden
Master in Artificial Intelligence Engineering — *Sep 2022 - Jun 2023*

Hanoi University of Science and Technology GPA: 3.12/4 — Hanoi, Vietnam
Degree of Engineer in Mechatronics Engineering — *Sep 2013 - Sep 2018*

Experience

Machine Learning Intern — June 2023 - Now
Viscando AB — *Gothenburg, Sweden*

- Thesis project: 3D object detection and tracking based Deep Neural Networks using stereo camera sensors.
- Utilizing stereo camera sensors developed by Viscando to extract 3D bounding box of objects, contributing to enhancing 3D&AI based sensor technology for safety on public roads and in intralogistics.

Research Assistant — Jan 2020 – Oct 2022
Phenikaa University — *Hanoi, Vietnam*

- Implemented Deep Learning models on Ultra-wideband radar for people counting applications with 97% accuracy running on NVidia Jetson nano.
- Tutored 30 students for the Computer Vision course.

Software Engineering — Apr 2019 - Jan 2020
ABB — *Ho Chi Minh city, Vietnam*

- Engineered and optimized the layout of a Robot Cell for palletizing applications, resulting in a 20% increase in production efficiency and a 15% reduction in operational costs compared to previous setups.
- Programmed and implemented offline programs for an Arc Welding robot, resulting in a 40% reduction in welding cycle time and a 50% decrease in weld defects, translating to annual savings of $30,000 in rework costs.

Projects

Smart Warehouse Inventory Management | *Python, Pytorch, Tensorflow, Keras* — Oct 2022 – Jan 2023

- Collaborated with NordiTech company developed a automatic text detection and recognition system using deep learning.
- Implemented a system that reliably detect, localize and clarify labels based on images from cameras located around the warehouse.

Mow-E collaborated with Husqvarna Robotics | *C++, Python, Git* — March 2023 – June 2023

- Pioneered the implementation of Particle Filtering SLAM technology, leveraging Lidar sensor data to ensure precise navigation and mapping capabilities, allowing the mower to operate autonomously within designated areas with unparalleled accuracy and efficiency.
- Collaborated with the backend team to establish REST API to establish a robust REST API infrastructure, enabling seamless communication between the lawn mower and the user's mobile app which facilitated real-time tracking, monitoring, and control of the mower's position and operations, enhancing user experience and convenience.

SINTIA | *Python, Pandas, Tensorflow, Git* — March 2023 – June 2023

- Developed an abnormal pedestrian behavior detection system based on their trajectories, which enhanced the perception in a stereo camera developed by Viscando AB.
- Preprocessed and analyzed time-series data extracted from the stereo camera.

Publication

Convolutional neural network for people counting using UWB impulse radar
C.-T. Pham, V.S. Luong, D.-K. Nguyen, H.H.T. Vu, M. Le. Journal of Instrumentation (IF1.415), Pub Date : 2021-08-12, DOI: 10.1088/1748-0221/16/08/p08031

Technical Skills

Languages: Python, C/C++, Matlab, Labview, Maple
Hardware: Raspberry Pi, Jetson Nano, Adruino
Developer Tools: Git, Docker, Google Cloud Platform, VS Code, Visual Studio, Jupiter notebook
Libraries: pandas, NumPy, Matplotlib