

# VU Thanh Tung

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## Experiences

**Lab FOTON, Rennes** 07/2023 - 09/2023  
Research Intern

- Developed an application with Qt for laser control and data analytics, the application facilitated laser experiments of the lab.
- Interfaced Python code with FPGA machines for experiment control, achieved 10ns synchronization.
- Designed pulse sequence to reproduce Rabi pulse and ODMR experiment on NV defects.

**ARMOR Group, Nantes** 06/2022 - 08/2022  
DevOps Intern

- Deployed mock servers to test jobs on 10 different scheduling tools and made comparisons.
- Deployed a pre-production server for Rundeck application, the app saved 30 minutes daily processing tickets for IT team.
- Studied RFC5424 logging convention and adapted the enterprise application to this convention to facilitate log processing.
- Tested **5 monitoring tools** with Docker, compared these tools to propose the best one.
- Done log rotation on Elasticsearch server, resulted in 90% of reduction of memory size.

## Education

**Institut national des sciences appliquées de Rennes, Rennes** 2019 - 2024

- Engineer of Computer Science, GPA: 3.5/4
- Foreign study at Korean Advanced Institute of Science and Technology, GPA: 92/100
- Relevant Coursework: DSA, High Performance Computing, **Quantum Information**, Design Pattern, Graph Neural Network, AI&ML, Reinforcement learning, OOP

**High school for the gifted Hanoi - Amsterdam, Hanoi** 2016 - 2019

- Major: Physics, GPA: 9.0/10
- Relevant Coursework: Electromagnetic, Calculus

## Projects

**Style Transfer with Graph Neural Network**

- Implemented the code for the paper "Learning Graph Neural Networks for Image Style Transfer" with **Pytorch**.
- Enhanced the model with **pyramid feature extraction**.

**Video Processing with 3DCNN and Attention mechanism**

- Built a light-weighted 3DCNN + Cross attention aggregation + self-attention layers with **Pytorch**.
- Conducted ablation studies on different configuration of the model.
- Tech stack: PyTorch, tmux

**Stock Trading with Reinforcement learning algorithms**

- Built a **Gym** environment for RL trading bots with FinRL.
- Collected stock market data and augmented the data by adding technical indicators.
- Tried different RL algorithms (**DDPG, PPO, A2C**) on the trading environments.
- Tech stack: FinRL, RLlib.

## Skills & Certificates

**Programming:** Python, Java, C++, Git, MongoDB.

**Data:** SQL, PyTorch, TensorFlow, Tensor board, PySpark, Tmux, NumPy, Matlab, R, CUDA.

**Quantum Computing:** Qiskit, IonQ, DWave Ocean.

**DevOps:** Rundeck, GitHub Actions, GitLab CI/CD, Ansible, ELK stack, Kubernetes.

**Certificates :**

- Quantum Mechanics (Polytechnique) | Coursera
- Deep learning Specialization | DEEPLARNING.AI
- SQL Advanced | HackerRank
- Machine Learning (Stanford) | Coursera

## Accomplishments & Certificates

**Finalist Cod'INSA**, represented INSA de Rennes to compete with other INSAs.

## Activities & Extracurriculars

**SVREN**, lead video creator 2020 - 2023

- Created every video for events of the association for 2 years 2021 and 2022, attracted more than 15k views.