TUAN TRUONG

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EDUCATION

MSc. in Biomedical Engineering **October 2019 - Present**

Medical Faculty, RWTH Aachen, Germany

BEng. in Biomedical Engineering **September 2014 – May 2019**

International University – Vietnam National University of Ho Chi Minh City, Vietnam

Major: Medical Image and Signal Processing - GPA: 87.3/100 (3.63/4)

WORKING EXPERIENCE

Thesis Student and Machine Learning Intern **March 2021 – Present**

Data Science & Advanced Analytics for Radiology

Bayer AG, Leverkusen, Germany

- Investigating the transferability of self-supervised approaches in medical classification tasks
- Language and framework: Python with Pytorch

Student Research Assistant **November 2019 – February 2021**

Institute of Imaging and Computer Vision

RWTH Aachen, Germany

- Building custom dataloaders for public haematological dataset
- Developing *Haematool*, a tool for detecting and classifying bone marrow cells using PyQt
- Manually reviewing cell annotations and developing tools for reading whole slide images (WSI)
- Language and frameworks: Python with Pytorch

Machine Learning Engineer **March – August 2019**

AI Application Department, Cao Thang Eye Hospital, Ho Chi Minh City, Vietnam

- Developed detection and classification models for detection of multiple retinal diseases using DL algorithms
- Wrote papers for company publication and organized collaborative team meetings
- Language and framework: Python with Pytorch

Research Intern **December 2018 – February 2019**

Department of Electrical and Computer Engineering (ECE)

The University of Auckland, New Zealand

- Project's title: Modelling and Prediction of Cardiac Electrophysiology Signal
- Investigated the inverse problem in electrophysiology using Machine Learning algorithms in time series
- Language and framework: Matlab with Deep Learning Toolbox

Research Assistant **August – December 2018**

Biomedical Optical Imaging and Spectroscopy Lab

Department of Biomedical Engineering, International University – VNU HCM, Vietnam

- Investigated the detection of diabetic retinopathy from fundus images using Deep Learning approach
- Built a library for processing and training Deep Learning models with retinal images with Keras and Pytorch
- Language and framework: Python with Pytorch and Keras

PROJECT

Master Thesis **September 2021 – Present**

Decision Science and Advanced Analytics for Radiology, Bayer AG

Department of Physics for Molecular Imaging, Institute for Experimental Molecular Imaging, RWTH Aachen

- Thesis title: Deep Learning based cough classification

Bachelor Thesis **January – August 2018**

Department of Biomedical Engineering, International University – VNU HCM

- Thesis title: Classification of Breast Cancer Histopathological Image using Convolutional Neural Network
- Performed analysis and comparison between patch-based and whole image approach in building Deep Learning models on histopathological images
- Language and framework: Python with Keras
- Grade: A+

PUBLICATION

- Truong, T., Mohammadi, S. and Lenga, M. (2021) 'How Transferable Are Self-supervised Features in Medical Image Classification Tasks?', URL arxiv.org/abs/2108.10048

SKILLS

- OS: GNU/Linux, Windows
- Programming Languages: C/C++, Matlab, Python
- Deep Learning Frameworks: Tensorflow (less proficiency), Pytorch (high proficiency) and Keras
- Libraries: OpenCV, PyQt5, Data Science Frameworks: Scikit-Learn
- Data: familiar in working with Fundus, Histopathological Image, and ECG Signal
- Interpersonal skills: communication, teamwork, project management, time management, decision making, innovation
- Languages: Vietnamese (Native), English (High Proficiency), German (Limited Proficiency)
- Other technical skills: Markdown, Git, Vim, Latex, SPSS, Tensorboard

AWARDS

- Tech Planter 2019 Awards from Rohto Pharmaceutical, Sun* and Saigon Innovation Hub **2019**
- Summer Research Scholarship by University of Auckland, New Zealand **2018**
- TL Foundation Scholarship for Exchange Student at Reutlingen University **2016**
- VNU – HCM International University Full Scholarship for Outstanding Student **2014**

Aachen, 22.09.2021

Tuan Truong