NGUYEN TAN SY | JUNIOR

I am a Computer Science graduate (M.Eng.) with project experience in educational research as well as in the private sector. During my studies I have been focusing on Signal Processing and moved over to Computer Vision based on Machine Learning technology.

STATUS

Master in Networks and Imaging Innovation and Engineering, focusing on Computer Vision and Machine Learning - Computer Science Engineer.

EXPERIENCE

Image Innovation Internship

Laboratoire de Traitement et Transport de l'Information (L2TI)
University Sorbonne Paris Nord, 2020/03 - now

- Classification project on an motivated approach based on Sparse Representation method and Machine Learning technologies.
  - Study of the Sparse Representation Wavelet based Classification (SRWC) method with pros and cons analysis.
  - Evaluation of the performance of CNN models based on existing dataset and topic purpose.
  - Combining two approaches SWRC and CNN for a hybrid model releasing.
- Technologies include:
  - Python and Matlab for main coding.
  - Linux and Docker for 1-click deployments.

Fullstack Software Engineer

NEC Vietnam Co Ltd., 2018/06-09

- Took a lead in creating a flexible human detection camera, targeting commercial purpose.
  - Creating and Evaluating the performance of some kinds of CNN models.
  - Establishing a real time connection to Socket server as well as Database.
  - System implementation on Raspberry Pi 3.
- Technologies and Achievements include:
  1. Technologies
     - Python and C++ on Pytorch and Tensorflow for main coding.
     - MySQL and MongoDB for database connection.
     - Django for the roles and rights management (backend is a REST interface).
     - HTML5/CSS/Bootstrap3 for frontend.
  2. Achievements
     - High accuracy realtime-model for human recognition on Raspberry Pi 3.
     - Online overview of company structures, projects, etc.

CONTACT

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@syseab1

FIELDS

Data Science - Computer Vision ★★★★★★★★★★

Consulting ★★★★★★★★★★

Project Management ★★★★★★★★★★

TECHNOLOGIES

Pytorch - Tensorflow/ Keras - Caffe
Python - C/C++ - Java - Matlab
HTML5/CSS - Bootstrap3 - PyQt5
MongoDB - PostgreSQL - MySQL

STRENGTH

Computer Vision	4+ yrs
Machine Learning	3+ yrs
Python	4+ yrs
Embedded System	2+ yrs
Networking - Cloud	2+ yrs

TOOLS

Terminal Matlab LaTeX
OpenCV - Cuda/ CuDNN - Torch
Git - Docker

OPERATING SYSTEMS

Blind students's tutor — Loving Shelter, 2016/04 - 2017/10

- Teaching a blind class, especially in natural sciences, and developing an annual volunteer program.
- Achievements include:
  - Building a sustainable model to teach disabled children natural sciences subjects.
  - Maintaining and continuing the volunteer program of my predecessors, inspiring next generation.

EDUCATION

Master of Engineering Computer Science — University Sobornne Paris Nord, 2019/09 - Ongoing

- Master Thesis: The topic focuses on neural network architectures to improve the existing sparse representations-based classification methods. The proposed method will be evaluated in the medical imaging contexts.
  - Developing a kernel SRC approach in the Wavelet domain.
  - Making use of a sparse transform such as the Quaternion Wavelet Transform (QWT) and combining between CNN and SWRC to implement a new method.
- Achievements
  - Awarded the Excellence Institute Galilee Scholarship (Master 2 of Engineering of Innovation in Image and Network [1]).
  - Graduating with highest-ranked place in the degree of Master2-3IR 2020.

Bachelor of Engineering — Ho Chi Minh University of Technology, 2015/09 - 2019/09

- Bachelor of Electrical - Electronics Engineering with the thesis topic of combinative implementation between Deep Learning approach and real-time matter of FPGA system (Zynq-7000 zc702 evaluation kit)
  - Real-time emotional recognition system implementation with CNN architecture.
  - Porting method into FPGA hardware with its constraints about parallel and optimization.
- Archivements
  - Educational award:
    - Honor program member of Faculty of Electrical & Electronic Engineering [2].
    - Awarding semester excellence scholarship with highest learning result [3]. Graduated in July 2019 with a good ratings.
  - Project award:
    - Full mark 10/10 in total result with the thesis oral representation and paper report.
    - Having a publication with index of Scimago (*).

High school — Nguyen Tran High School, 2012/09 - 2015/07

- High school students with an advanced curriculum in natural sciences including Math, Physics, Chemistry and Biology
- Achievement
  - All 'A' passes for Mathematics, Physics and Chemistry
  - University Examination Score: 27.75/30 [4].

PUBLICATIONS DETAIL

(*) "FPGA Platform applied for Facial Expression Recognition System using CNNs". The 10th International Conference on Ambient Systems, Networks and Technologies (ANT 2019) / The 2nd International Conference on Emerging Data and Industry 4.0 (EDI40 2019) / Aliated Workshops, Procedia Computer Science, ISSN= 1877-0509, Vol. 151, pp. 651-658. Indexed by Scimago (2)

MOST PROUD OF

[1] *Based on academic results and research accumulated during the bachelor's degree, receiving a Master scholarship to continue developing the post-graduated studying program in France.*

[2] *One of 27 students was recruited into the talented engineering program, overcame 700+ participants in Department of Telecommunications Engineering*

[3] *Based on the results of each semester, the university selects students with the highest ranking to award excellent scholarships.*

[4] *After graduating from high school, achieved high results in the university entrance examination with a total mark of 3 subjects is 27.75 / 30 points*

LANGUAGES

Vietnamese
English
French

ACTIVITIES

SOFT SKILLS

Communication
Teamwork
Empathy
Decision-Making

RESEARCH PROJECTS

① Sy Nguyen-Tan. (2020). *"CNN- Sparse Representation Classification Hybrid for Face Recognition"*. https://github.com/tansyab1/CNN-Sparse

② Sy Nguyen-Tan. (2020). *"Project of Web Application Course "*.
https://github.com/tansyab1/aw3ir

③ Thuong Le-Tien, Sy Nguyen-Tan, Hanh Phan-Xuan. (2019a). *"FPGA platform applied for facial expression recognition system using CNNs"*.
(*)/FPGA-Platformapplied-for-Facial-Expression-Recognition-System-using-CNNs

④ Thuong Le-Tien, Sy Nguyen-Tan, Hanh Phan-Xuan. (2019b). *"Light-weight deep convolutional network-based approach for recognizing emotion on FPGA platform"*.
https://link.springer.com/content/pdf/10.1007%2F978-3-030-35653-8.pdf

⑤ Quang Nguyen-Van, Sy Nguyen-Tan. (2018a). *"Net-chatting"*.
https://github.com/kwangk4/NetChatting

⑥ Sy Nguyen-Tan, Tai Nguyen, Phu Nguyen-Tan. (2018b). *"Face recognition system"*.
https://github.com/TanPhuNguyen/Face-Recognition

⑦ Thuy Nguyen-Chinh, Thien Do-Tieu, Sy Nguyen-Tan. (2018c). *"An attendance checking system using deep facial recognition, written in python"*.
https://github.com/AntiAegis/Face-Attendance-System

⑧ Thuy Nguyen-Chinh, Thien Do-Tieu., Sy Nguyen-Tan. (2018d). *"The project of artificial intelligence in control engineering course"*.
https://github.com/AntiAegis/Artificial-Intelligence-in-Control-Engineering

JOURNALS AND PROCEEDINGS

① Sy Nguyen-Tan, Hai-Long Ngo, Marie Luong, Mounir Kaaniche, Azeddine Beghdadi. (2020). "Convolution Autoencoder-Based Sparse Representation Wavelet Classification". *Submitted in the IEEE 22nd International Workshop on Multimedia Signal Processing (MMSP 2020)*. Tampere, Finland, September 21-23, 2020.

② Hanh Phan-Xuan, Thuong Le-Tien, Sy Nguyen-Tan. (2019). "FPGA platform applied for facial expression recognition system using CNNs". *In: the 10th International Conference on Ambient Systems, Networks and Technologies (ANT 2019) / The 2nd International Conference on Emerging Data and Industry 4.0 (EDI40 2019) / Aliated Workshops*. Procedia Computer Science, ISSN= 877-0509, Vol. 151, pp. 651-658. Indexed by Scimago.

③ Sy Nguyen-Tan, Tuan Vu-Duc. (2019). "FPGA platform applied for facial expression recognition system using CNNs". *In Proceedings of the Bach Khoa Youth's Science and Technology Conference 2019*. Ho Chi Minh City, Vietnam.

④ Thuong Le-Tien, Hanh Phan-Xuan, Sy Nguyen-Tan. (2019). "Light-Weight Deep Convolutional Network-Based Approach for Recognizing Emotion on FPGA Platform". *In: Dang, T.K., Küng, J., Takizawa, M., Bui, S.H. (Eds.) Future Data and Security Engineering 2019 (FDSE 2019)*. Springer, ISSN= 0302-9743, ISBN= 978-3-030-35652-1,LNCS Vol. 11814, pp. 287-306. Indexed by Scopus.

REFEREES

Prof. Dr. Thuong LE-TIEN [5] — Ho Chi Minh University of Technology, Vietnam

- Senior Lecturer in Department of Telecommunications Engineering
- Contact detail

- +84-903-787-989 thuongle@hcmut.edu.vn

Associate Prof. Marie LUONG [6] — University Sorbonne Paris Nord, France

- Prime d'Encadrement Doctoral et de Recherche (PEDR): 2016-2019, Laboratoire L2TI
- Contact detail

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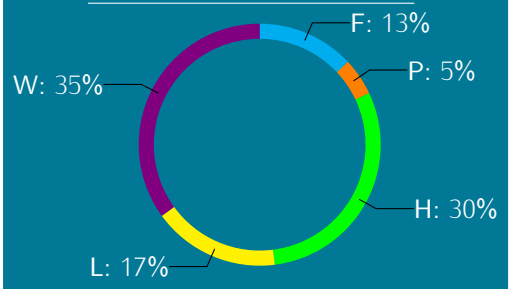
REFEREES DETAIL

[5] *Since May-1981, Prof. Dr. Thuong LE-TIEN has been a teaching assistant then the lecturer in the Electronics Telecommunications Department, Ho Chi Minh City University of Technology. He received the Ph.D. in Telecommunications from the University of Tasmania, Australia in 9-1998. He had been awarded the title Associate Professor and then National Distinguished Lecturer from the Academic State Council and the Chairman of National in 2003 and 2008 in respectively before awarded the title Full Professor by the Academic State Council in October 2016.*

[6] *carrying out research activities on the system diagnosis and validation. Since the appointment as Lecturer at the University Sorbonne Paris Nord, Mrs. Marie took responsibility for the modules of Electrical Engineering and Power Electronics and carried out my activities of teaching at the GEII Department (Genie Electrique et Informatique Industrielle). At the same time, she was carrying out my research activities at the L2TI laboratory (Laboratoire de Traitement et de Transport de l'Information - Universite Sorbonne Paris Nord). The research themes is image quality innovation and processing.*

A DAY OF MY LIFE



- F: Spending time with family
- P: Planning out task for upcoming day.
- L: Learning state of the art specialized knowledge and soft skills.
- H: Time for daily activities and personal interests.
- W: Working time for completing current task.