

# An Tran

*PhD candidate*

E4-06-21, 4 Engineering Drive 3

117583 Singapore

✉ [tranlaman@gmail.com](mailto:tranlaman@gmail.com)

📁 [antran89.github.io/](https://github.com/antran89)

🐙 [antran89](#)

in [tranlaman](#)

## Summary

My general interests are in the fields of computer vision, machine learning and heterogeneous computing. Currently, my research focus is on temporal modeling of video, action recognition, action detection, deep learning, and structured prediction.

## Education

- Aug **PhD**, *National University of Singapore (NUS)*, Singapore.
- 2012–Aug Advisors: Prof. Loong-Fah Cheong, Prof. Qi Zhao
- 2017 Research areas: Computer Vision, Machine Learning
- Thesis topic: *Foreground-centric Action Recognition*
- Aug **B.Eng.**, *Ho Chi Minh City University of Technology (HCMUT)*, HCM City, 8.92/10.
- 2007–Apr Major: Computer Engineering
- 2012 Thesis topic: *Measuring Available Bandwidth in Wireless Environment*
- Advisors: Dr. Nam Thoai, Prof. Tran Vu Pham, Prof. Guillaume Urvoy-Keller

## Work Experience

- Apr 2012–Jun **Software Engineer**, *Softfoundry Technology Pte Ltd*, HCM City.
- 2012
  - Identifying bottlenecks and improving networks infrastructure for video conference products.

## Research Experience

- Sep **Research Intern**, *I3S Lab, Universite Nice Sophia Antipolis*, Sophia Antipolis, France.
- 2011–Mar
- 2012
  - Investigating different approaches to measure the bandwidth in wireless networks.
- Aug **PhD Candidate**, *Vision and Interactive Media Lab, Dept. of Electrical & Computer Engineering, NUS*.
- 2012–Present
  - Developing a spatio-temporal actionness measure, then actionness-assisted action recognition pipeline using Bag-of-Words (BoW) approach.
  - Developing two-stream flow-guided convolutional attention networks for action recognition.
  - Proposing different methods to capture long-term temporal nature of videos.

## Publications

- C1 Ye Luo, Loong-Fah Cheong, **An Tran**. Actionness-assisted Recognition of Actions, in *The IEEE International Conference on Computer Vision (ICCV)*, 2015.

- C2 **An Tran**, Loong-Fah Cheong. Two-stream Flow-guided Convolutional Attention Networks for Action Recognition, in *The IEEE International Conference on Computer Vision Workshop (ICCVW)*, 2017.

## Expertise

- Computer Vision Action recognition, object recognition, action detection, video representations.
- Machine Learning Support vector machines, graphical models, deep learning, convolutional neural network (CNN), recurrent neural network (RNN), long short term memory (LSTM), attention mechanism.

## Service

- Contributor
  - Small contributions in OpenCV, Caffe library.
  - Offered feedbacks on the content of the Deep Learning book.
- Academic service
  - Reviewer of IEEE International Conference on Computer Vision Workshop, 2017.

## Programming Skills

- Languages C/C++, Matlab, Python, Bash.
- Libraries & frameworks OpenCV, Caffe, Torch, PyTorch, NVIDIA DIGITS, CUDA, scikit-learn, LIBSVM, Yael, VLFeat, Boost, Eigen.
- Tools: Git, Cmake, QtCreator, L<sup>A</sup>T<sub>E</sub>X, Linux, Windows.
- Open Source Contribution BoW frameworks for action recognition (Matlab toolbox link), small bug fixes in OpenCV, Caffe.

## Competitions

- July 2017 ActivityNet Challenge 2017 *Untrimmed Video Classification: rank 12/29*  
*Trimmed Action Recognition: rank 11/19*

## Relevant courses

- NUS EE5731R Visual Computing, EE5907R Pattern Recognition, EE5904R Neural Networks, EE6901 3D Vision, EE6733 Advanced Topics on Vision and Machine Learning, EE6903 Advanced Models of Biological Perception, EE5138R Optimization for Communication Systems, CS4248 Natural Language Processing, CS6101 Deep Learning for NLP, CS6240 Multimedia analysis, CS5340 Uncertainty Modelling in AI, CS5228 Knowledge Discovery and Data Mining, CS5234 Combinatorial and Graph Algorithms, CS5224 Cloud Computing.
- Coursera Probabilistic Graphical Models (with Distinction), Machine Learning, Computational Photography (with Distinction), Algorithms (Part I & II) and others.
- Udacity Intro to Machine Learning, Intro to Parallel Programming.

An Tran  
E4-06-21, 4 Engineering Drive 3  
117583 Singapore  
✉ tranlaman@gmail.com  
📄 antran89.github.io/

Company Recruitment team

Aug 17, 2017

Dear Sir or Madam,

“We are drowning in information, while starving for wisdom” <sup>1</sup>. We are living in the world of collecting big data, and utilizing computer and algorithms to analyze data. Before the artificial general intelligence is achieved, machine learning algorithms are the most useful tools to harness data for intelligence. However, there is **no free lunch theorem**, “all models are wrong, but some models are useful” <sup>2</sup>. As a consequence, we need to choose a right combination of data, models and algorithms to solve a practical problem efficiently and effectively.

After 5 years of doing PhD researches in video classification problems, I have developed general interests in Computer Vision (CV) and Machine Learning (ML) fields. In free time, I also spend time to learn some natural language processing (NLP) techniques for my curiosity. I foresee that a successful career in working data requires the ability of learning: to expand the knowledge of models and algorithms, and to update the advanced computing infrastructure to handle big data. Through conducting researches, I have developed skills to work with data more efficiently: working with CV or ML open source libraries, implementing and evaluating different ML models, reading technical research papers and books, working various computing stacks (e.g., graphics processing unit (GPU), high performance computing), developing critical thinking about different approaches/models/algorithms in ML, writing skills to deliver research results properly, etc. My career goal is to seek intelligence from data to serve our society. Although my obtained skills and knowledge in doctoral program are moderate, I am ready to solve industrial challenges of analyzing big data in the role of a researcher, data scientist or an engineer.

If data and technology have been tremendous tools to drive the company's businesses forward, with all experiences and knowledge, I hope to be a part of solutions to the company's missions.

Yours faithfully,

An Tran

*Attached: curriculum vitae*

---

[https://en.wikiquote.org/wiki/E.\\_O.\\_Wilson](https://en.wikiquote.org/wiki/E._O._Wilson)  
[https://en.wikipedia.org/wiki/All\\_models\\_are\\_wrong](https://en.wikipedia.org/wiki/All_models_are_wrong)