

# CUONG DUC DAO

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King Abdullah University of Science and Technology  
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## EDUCATION

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<b>Hanoi University of Science and Technology</b> B.Eng. in Information Technology GPA: 3.40/4.00 – Top 5%	Hanoi, Vietnam 2011 – 2017
<b>Uppsala University</b> Erasmus Mundus exchange student	Uppsala, Sweden 2013 – 2014

## PUBLICATIONS

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1. **Guess Where? Actor-Supervision for Spatiotemporal Video Action Localization**, under review for *Computer Vision and Pattern Recognition (CVPR) 2018*
2. **A Novel Framework for Robustness Analysis of Visual QA Models**, under review for *Computer Vision and Pattern Recognition (CVPR) 2018*
3. Duc Cuong Dao\*, Thi-Oanh Nguyen\*, Stéphane Bressan. **Factors Influencing the Performance of Image Captioning Model: An Evaluation**, In *Proceedings of The 14<sup>th</sup> International Conference on Multimedia and Mobile Computing (MoMM) 2016*, Singapore [PDF]
4. Duc Cuong Dao, Hua Xiaohui, Oliver Morère. **Maritime Vessel Images Classification using Deep Convolutional Neural Networks**, In *Proceedings of The 6<sup>th</sup> International Symposium on Information and Communication Technology (SoICT) 2015*, Hue, Vietnam [PDF]

## RESEARCH EXPERIENCES

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<b>Image and Video Understanding Lab</b> <i>Research Student; Advisor: Prof. Bernard Ghanem</i>	KAUST, Saudi Arabia Aug 2017 – present
<ul style="list-style-type: none"><li>• Implementing actor-supervision based algorithm for spatiotemporal actional localization in video data. The system achieves state-of-the-art performance on weakly-supervised action localization tasks on a number of standard benchmarks.</li><li>• Developing benchmark dataset which contributes to a novel framework for robustness analysis of Visual Question Answering (VQA) models.</li><li>• Developing algorithms for fine-grained fish detection in underwater camera footage.</li></ul>	
<b>Data Science Lab</b> <i>Research Student; Advisor: Prof. Thi-Oanh Nguyen</i>	HUST, Vietnam Sep 2015 – Jun 2016
<ul style="list-style-type: none"><li>• Implemented image classification systems using convolutional neural networks.</li><li>• Evaluated several neural image captioning models and propose alternatives for the vision module and optimization algorithm of an image captioning model which is composed of a convolutional and a long short-term memory network. Our proposal achieves the same performance with well-known models while being less complex in terms of number of parameters and faster to train on commodity hardware.</li></ul>	

**School of Computing***Research Assistant; Advisor: Prof. Stéphane Bressan*

NUS, Singapore

Jun 2015 – Sep 2015

- Designed and implemented a data crawling and wrangling system to collect maritime data (particularly vessel images and meta data) from various sources in the Internet.
- Proposed, implemented and evaluated a deep convolutional neural network for vessel images classification. Our model is half-size compared to well-known convolutional networks and achieves a top-1 accuracy of 95.31% when classifying natural vessel images into 35 classes.

**TEACHING AND LEADERSHIP EXPERIENCES**

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**Hanoi University of Science and Technology**

Hanoi, Vietnam

*Teaching assistant for Big Data Course**by Prof. Jennifer Widom – Stanford University*

Nov 2016

- Organized class administration, moderated online discussion platform.
- Supported students with technical questions during and after the lecture.

**Hanoi University of Science and Technology**

Hanoi, Vietnam

*Teaching assistant for IT3090 - Databases*

Aug 2016 – Jan 2017; Sep 2015 – Jan 2016

- Organized in-class discussions, moderated online learning platform.
- Designed weekly assignments, tutorials for practical sessions for class of 150 to 200 students.

**Keio University**

Tokyo, Japan

*EBA Fieldwork participant*

Mar 2016

- Lead a team of 5 members from Asean countries to design and implement a data analytic platform for online learning system using the latest technologies including Facebook ReactJS, WebRTC.
- Conducted experiment with the platform on a small-size class of university students majored in industrial design, analyze collected data relating to user's behaviors and learning outcomes.

**Seoul Cyber University**

Seoul, South Korea

*ACU Ambassadorial scholar*

Oct 2014

- Lead a team of 10 students from Asean countries to study about several environmental problems in South Korea and South East Asian countries.
- Conducted fieldwork experiments and propose solutions to those problems.

**INDUSTRIAL EXPERIENCES**

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**Airpoli App**

Hanoi, Vietnam

*Backend Developer*

Jun 2016 – Jan 2017

- Designed and developed a content management system for Airpoli language learning app using Python Django, PostgreSQL, Redis, ReactJS.
- Designed and developed natural language processing modules for analyzing and annotating the content of the app using NLTK.

**FPT Information Systems**

Hanoi, Vietnam

*SQL Developer*

Jan 2014 – Sep 2014

- Developed tax invoices processing modules for National Income Tax System using pSQL on Oracle database.
- Deployed the modules to more than 200 tax offices across the country.

## HONORS AND AWARDS

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- **Visiting Student Research Scholarship (VSRP)** granted by King Abdullah University of Science and Technology (KAUST) which covers travel tickets, housing, insurance and monthly stipends for a six-month internship.
- **Best thesis award (2016)** for “excellent performance” in both presentation and progress evaluations of my thesis. Cumulative grade: 9.56/10
- **Erasmus Mundus Scholarship (2013)** , awarded for most talented students from ASEAN universities. I was the only undergraduate at HUST to get the scholarship in the year of 2013.
- **Annual university scholarship (2011 – 2016)** awarded by Hanoi University of Science and Technology for top students of each schools

## TECHICAL SKILLS

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- **Languages:** Python, PHP, HTML, CSS, Javascript.
- **ML Libraries:** Caffe, Torch, Tensorflow, Python Pandas.
- **Databases:** PostgreSQL, MySQL, Redis.
- **Miscs:** Python Django, PHP Laravel, Bootstrap CSS, ReactJS

## LANGUAGE SKILLS

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- **Vietnamese:** native speaker
- **English:** proficient in reading, writing and communication. TOEFL iBT 92/120