Nam Duong DUONG

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EDUCATION

2016 – 2019 PhD – CentralSupélec

Specialized: Signal, Image, Vision

2015 – 2016 IT master - Pierre and Marie Curie University - Telecom ParisTech

Specialized: Image processing - Advanced Image Processing and Vision

Grading: Good

2010 – 2015 IT Engineer - Hanoi University of Science and Technology, Vietnam

Specialized: **Information and Communication Systems**

EXPERIENCES

09/2019-	Research Development Engineer at Institute of Research and Technology b-com
Present	Augmented Reality and Computer Vision projects for Industry and Healthcare 4.0
09/2016-	PhD student at Institute of Research and Technology b-com
08/2019	<u>Thesis:</u> Hybrid Machine Learning and Geometric Approaches for Single RGB Camera Relocalization.
02-07/2016	Master internship at INNOV-PLUS, Orsay, France
	<u>Subject</u> : Embedded Electronic Development: Real-Time Porting of Image Processing Algorithms
	<u>Task</u> : Develop the driver alertness system to reduce driver fatigue losses
08/2014 -	Research Internship – MICA Research Institute (IPH-CNRS/UMI 2954 INP Grenoble, Vietnam)
07/2015	<u>Task 1:</u> Research and development computer vision algorithms for identifying plants using their
	image.
	<u>Task 2:</u> Build image processing systems to detect, track and characterize boats on the sea.
06-08/2014	Engineer Internship – BK-ICT (an IT company, Vietnam)
	<u>Task:</u> Research of the ARM microcontroller and creation of a communication system at a hospital
	by wifi.
07-08/2013	Engineer Internship – LIFETIME (an IT company, Vietnam)
	<u>Task:</u> iOS application development
03-05/2013	Project – Microsoft competition, Hanoi University of Science and Technology
	<u>Task:</u> Construction a learning application for kids
	Achieved the Second prize the Microsoft Competition

PUBLICATION

- 1. **Nam-Duong Duong**, Catherine Soladie, Amine Kacete, Pierre-Yves Richard, Jérôme Royan, Efficient multioutput scene coordinate prediction for fast and accurate camera relocalization from a single RGB image, Computer Vision and Image Understanding, 2019.
- 2. **Nam-Duong Duong**, Amine Kacete, Catherine Soladie, Pierre-Yves Richard, Jérôme Royan, DynaLoc: Real-Time Camera Relocalization from a Single RGB Image in Dynamic Scenes based on an Adaptive Regression Forest, 15th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications, VISIGRAPP 2020.

- Nam-Duong Duong, Catherine Soladie, Amine Kacete, Pierre-Yves Richard, Jérôme Royan, Forêt de Régression Précise basée sur des Caractéristiques Éparses pour la Relocalisation de Caméra en Temps-Réel, GRETSI, Lille, France, 2019.
- 4. **Nam-Duong Duong**, Amine Kacete, Catherine Sodalie, Pierre-Yves Richard, Jérôme Royan, xyzNet: Towards Machine Learning Camera Relocalization by Using a Scene Coordinate Prediction Network, In IEEE International Symposium on Mixed and Augmented Reality Adjunct (ISMAR-Adjunct), pp. 258-263, Munich, Germany, 2018.
- 5. **Nam-Duong Duong**, Amine Kacete, Catherine Soladie, Pierre-Yves Richard, Jérôme Royan, Accurate Sparse Feature Regression Forest Learning for Real-Time Camera Relocalization, In IEEE International Conference on 3D Vision (3DV), pp. 643-652, Verona, Italy, 2018.
- 6. **Nam-Duong Duong**, Amine Kacete, Catherine Soladie, Pierre-Yves Richard, Jérôme Royan, Online Sparse Scene Coordinates Learning for Real-Time Camera Relocalization, In IEEE International Conference on 3D Vision (3DV)(demo), Verona, Italy, 2018.
- 7. **Nam-Duong Duong**, Amine Kacete, Catherine Soladie, Pierre-Yves Richard, Jérôme Royan, Relocalisation Robuste de Caméra en Temps Réel pour la Réalité Augmentée par une Approche Hybride combinant Réseaux de Neurones et Méthodes Géométriques, Dans le congrès Reconnaissance des Formes, Image, Apprentissage et Perception (RFIAP), Marne-la-Vallée, France, 2018.
- 8. Thi-Lan Le, **Nam-Duong Duong**, Hai Vu, Thanh-Nhan Nguyen, MICA at LifeCLEF 2015: Multi-organ Plant Identification, CLEF 2015 Working Notes proceedings, 2015
- 9. Thi-Lan Le, **Nam-Duong Duong**, Hai Vu, Van-Toi Nguyen, Van-Nam Hoang, Thi Thanh Nhan Nguyen, Complex Background Leaf-based Plant Identification Method Based on Interactive Segmentation and Kernel Descriptor, The 2nd International Workshop on Environmental Multimedia Retrieval (EMR 2015) in conjunction with ICMR 2015, Shanghai, China; 06/2015

PATENTS

- 1. **Nam-Duong Duong**, Amine Kacete, Catherine Soladie. Method for Estimating the Installation of a Camera in the Reference Frame of a Three-Dimensional Scene, Device, Augmented Reality System and Associated Computer Program. Patent WO2019091787.May 16, 2019.
- 2. **Nam-Duong Duong**, Amine Kacete, Catherine Soladie. Procédé de prédiction d'une représentation en trois dimensions (3D), Dispositif, Système et Programme d'ordinateur correspondant. Patent FR1873626.

TECHNICAL SKILLS

Techniques Image Processing, Computer Vision, Machine Learning, Augmented Reality

Programming: C++, Python, C#, Matlab, Unity3D. **Framework:** OpenCV, Pytorch/Libtorch, Caffe.

Languages French, English, Vietnamese (mother tongue).

AWARDS

9/2015	Master scholarship of the Ile de France region
6/2015	First prize at the "Scientific Research Competition" of the MICA Institute – CNRS/UMI 2954
6/2013	Second prize at the Microsoft Competition
4/2009	Second Prize in Information Technology at the 2009 National Contest for Gifted High School Students.
4/2008	Second Prize in Information Technology at the 2008 National Contest for Gifted High School Students.

HOBBIES

Sports: Football, badminton, table tennis.

Others: traveling, music, cinema.