

## EDUCATION

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### Electrical and Computer Engineering - University of Illinois at Urbana-Champaign

IL, USA

*Ph.D. Student*

6/2020-present

- **Research interest:** computer vision and machine learning; medical image processing, AI in healthcare
- **GPA:** 4.0/4.0
- **Academic advisor:** Prof. Minh N. Do
- **Expected day of graduation:** August 2026

### Computer Science - University of Science - VNU-HCM

HCMC, Vietnam

*Bachelor of Science, Honor Program*

2015-2019

- **GPA:** 9.15/10.0 (Top 2/600 - Degree class: *Excellent*)
- **Academic advisor :** Assoc. Prof. Minh-Triet Tran

## WORK EXPERIENCE

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### Computational Imaging Group, ECE, CSL, University of Illinois at Urbana-Champaign

*Student Internship*

9/2019-11/2019

- **Description:** We proposed and implemented the Digitized Neurological Examination (DNE) system to collect, visualize, annotate, and quantify digital biomarkers from neurological exam video recordings obtained by multiple sensors, including 3D cameras, smartphones/tablets, and wearable sensors.
- **Advisor:** Prof. Minh N. Do

### Multimedia and Human Computer Interaction Group, SELab, University of Science, VNU-HCM

*Research Assistant*

8/2018-9/2019

- **Description:** We proposed and implemented a diagnostic support system that can help doctors to find diseases, abnormal marks, anatomical landmarks in human gastrointestinal tract. We also participated in several projects in computer vision and machine learning (*Intelligence Traffic System - AI City challenge*, *Video Instance Segmentation – the DAVIS challenge (CVPRW)*; *Life-logging*).
- **Advisor:** Prof. Minh-Triet Tran

### College of Engineering and Computer Science, VinUniversity

*Teaching Assistant*

1/2021-5/2021

- **Description:** I in-charge the lab section and designed the course programming assignments in Python for CECS1020 - Introduction to Machine Learning by Prof. Minh N. Do, Spring 2021 semester.

### Robotics & IoT Club, Artificial Intelligence Lab, University of Science, VNU-HCM

*Research Assistant*

8/2018-9/2019

- **Description:** I served as an instructor at several introductory-level courses in Python programming, and IoT. I also developed a mixed-reality virtual laboratory application for learning chemistry in high school.
- **Advisor:** Prof. Minh-Triet Tran, MSc. Xuan-Nam Cao

## SKILLS

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1. **Programming languages:** Python, C/C++, C#, Swift, JavaScript, HTML/CSS
2. **Technologies:** PyTorch, TensorFlow, NumPy, Unity, NodeJS,  $\text{\LaTeX}$
3. **Languages:** Vietnamese (native), English (fluent)

## PUBLICATIONS

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1. Minh-Triet Tran, Tam V Nguyen, **Trung-Hieu Hoang** et al. iTASK-Intelligent Traffic Analysis Software Kit. *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition Workshops*, 2020.
2. Minh-Triet Tran, **Trung-Hieu Hoang** et al. Multi-Referenced Guided Instance Segmentation Framework for Semi-supervised Video Instance Segmentation. *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition Workshops*, 2020.

3. **Trung-Hieu Hoang**, Hai-Dang Nguyen, Viet-Anh Nguyen, Thanh-An Nguyen, Vinh-Tiep Nguyen, Minh-Triet Tran. Enhancing Endoscopic Image Classification with Symptom Localization and Data Augmentation. *Proceedings of ACM Multimedia*, 2019.
4. Khac-Tuan Nguyen, **Trung-Hieu Hoang**, Minh-Triet Tran, Ngoc-Minh Bui, Trong-Le Do, Viet-Khoa Vo-Ho, Quoc-An Luong, Mai-Khiem Tran, Thanh-An Nguyen, Thanh-Dat Truong, Vinh-Tiep Nguyen, Trung-Nghia Le, and Minh N. Do. Vehicle Re-identification with Learned Representation and Spatial Verification and Abnormality Detection with Multi-Adaptive Vehicle Detectors for Traffic Video Analysis. *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition Workshops*, 2019.
5. Minh-Triet Tran, Trung-Nghia Le, Tam V. Nguyen, That-Vinh Ton, **Trung-Hieu Hoang**, Ngoc-Minh Bui, Trong-Le Do, Quoc-An Luong, Vinh-Tiep Nguyen, Duc Anh Duong, Minh N. Do. Guided Instance Segmentation Framework for Semi-supervised Video Instance Segmentation. *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition Workshops*, 2019.
6. **Trung-Hieu Hoang**, Mai-Khiem Tran, Vinh-Tiep Nguyen, Minh-Triet Tran. Solving Life Puzzle with Visual Context-based Clustering and Habit Reference. *ImageCLEF - Multimedia Retrieval in CLEF 2019*.
7. Nguyen-Khang Le, Dieu-Hien Nguyen, **Trung-Hieu Hoang**, Thanh-An Nguyen, Thanh-Dat Truong, Duy-Tung Dinh, Quoc-An Luong, Viet-Khoa Vo-Ho, Vinh-Tiep Nguyen, and Minh-Triet Tran. *Smart lifelog retrieval system with habit-based concepts and moment visualization. LSC, 2019.*

List of publications on [Google scholar](#).

## BOOK CHAPTER

1. Hai-Quan Vu, Xuan-Nam Cao, Trung-Hieu Hoang, Hai-Trieu Nguyen, Chi-Tai Vong. “Introduction to Python programming language” (in Vietnamese). *Vietnam National University in Ho Chi Minh City*, 2019.

## RELEVANT COURSES

- **ECE 449 - Machine Learning** by Prof. Sanmi Koyejo (UIUC - Fall 2020)
- **ECE 490 - Introduction to Optimization** by Prof. Venugopal V. Veeravalli (UIUC - Fall 2020)
- **ECE 549 - Computer Vision** by Prof. Saurabh Gupta (UIUC - Spring 2021)
- **CS547 - Deep Learning** by Prof. Richard Sowers (UIUC - Spring 2021)
- **ECE 534 - Random Processes** by Prof. Dimitrios Katselis (UIUC - Fall 2021)
- **ECE 551 - Digital Single Processing II** by Prof. Zhi-Pei Liang (UIUC - Fall 2021)

## HONORS AND AWARDS

- Asia Regional Winner in Computer Science field – The Global Undergraduate Awards 2020 2020
- Recommended candidate by VEF 2.0 Program 2020
- 4<sup>th</sup> Place Award - the Semi-supervised track, DAVIS Challenge 2020, CVPR 2020 2019
- Ho Chi Minh City Young Citizenship Award 2019 2019
- First prize – the 21<sup>st</sup> National Student Scientific Research 2019
- 3<sup>rd</sup> Place Award - the Semi-supervised track, DAVIS Challenge 2019, CVPR 2019 2019
- Ho Chi Minh City ICT Award in 2018 2018
- First prize in Makerthon 2018 (Hackathon competition) 2018
- Prospect prize in KMS Hackathon 2018 – 30-hour hacking for social impacts 2018
- Second prize in the 2<sup>nd</sup> Vietnam Maker Contest 2017
- Third prize (Physics and Astronomy) Viet Nam National Student Science and Engineering Fair 2015
- Second prize (Computer Science) Viet Nam National Student Science and Engineering Fair 2014
- Silver medals in subject the April 30<sup>th</sup> Tradition Olympiad (Computer Science subject) 2014 – 2015

## INTERNATIONAL EXCHANGE PROGRAM

1. 14<sup>th</sup> Enterprise Summer Programme, National University of Singapore July 2019
2. ASEAN – India International Exchange program, India May 2018
3. 2018 Asia-Pacific Youth Forum on Digital Innovation and Entrepreneurship, Taipei October 2018
4. Spring School Programme 2017, Chiba University and ASEAN University Network, Japan March 2017

## REFERENCE

1. **Prof. Minh N. Do**, Department of Electrical and Computer Engineering University of Illinois at Urbana-Champaign. [minhdo@illinois.edu](mailto:minhdo@illinois.edu)
2. **Assoc. Prof. Minh-Triet Tran**, Vice President, Head of Software Engineering Lab, Deputy Head of Artificial Intelligence Lab – University of Science, VNU-HCM [tmtriet@hcmus.edu.vn](mailto:tmtriet@hcmus.edu.vn)