Trung-Hieu Hoang

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EDUCATION

Electrical and Computer Engineering (ECE) - University of Illinois at Urbana-Champaign　　　IL,USA
Ph.D. Student (Expected day of graduation: August 2026)　　　*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

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

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:** Assoc. Prof. Minh-Triet Tran

College of Engineering and Computer Science, VinUniversity
Teaching Assistant　　　*1/2021-5/2021*
- **Description:** I in-charged 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

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

PUBLICATIONS

1. **Trung-Hieu Hoang** and Mona Zehni, Huaijin Xu, George Heintz, Christopher Zallek, Minh N. Do. Towards a Comprehensive Solution for a Vision-based Digitized Neurological Examination *(Under review)*.
2. 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.*
3. 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.*

4. **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.*

5. 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.*

6. 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.*

7. **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.*

8. 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 programing 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 Signal 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*
- 4th Place Award - the Semi-supervised track, DAVIS Challenge 2020, CVPR 2020 *2019*
- Ho Chi Minh City Young Citizenship Award 2019 *2019*
- 1st prize – the 21st National Student Scientific Research *2019*
- 3rd Place Award - the Semi-supervised track, DAVIS Challenge 2019, CVPR 2019 *2019*
- Ho Chi Minh City ICT Award in 2018 *2018*
- 1st prize in Makerthon 2018 (Hackathon competition) *2018*
- Prospect prize in KMS Hackathon 2018 – 30-hour hacking for social impacts *2018*
- 3rd prize (Physics and Astronomy) Viet Nam National Student Science and Engineering Fair *2015*
- 2nd prize (Computer Science) Viet Nam National Student Science and Engineering Fair *2014*
- Silver medals in subject the April 30th Tradition Olympiad (Computer Science subject) *2014 – 2015*

INTERNATIONAL EXCHANGE PROGRAM

1. 14th 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*
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*