

DOANH CAO BUI

University of information Technology, VNU-HCM

Mobile: +84-938237990 • Email: 19521366@gm.uit.edu.vn

• Website: caodoanh2001.github.io • Scholar: shorturl.at/dg127

• ORCID: [0000-0003-1310-5808](https://orcid.org/0000-0003-1310-5808) • Researchgate: [Doanh-Bui-4](https://www.researchgate.net/profile/Doanh-Bui-4)



September 25, 2022

RESEARCH INTERESTS

My current research focuses on some Computer Vision problems: Object Detection, Human-Object Interaction, Image Captioning, Document Understanding, and OCR.

EDUCATION

- 08/2019 – 09/2022 **B.Sc. of Computer Science,**
University of Information Technology, Vietnam National University Ho Chi Minh City
- » **Thesis: “Text-based Image Captioning using Deep Learning” (Points: 10/10)**
 - » Supervisor: Dr. Khang Nguyen (khangnttm@uit.edu.vn).
 - » Area of specialty: computer vision, image processing, deep learning, image captioning
 - » Overall GPA: **8.97/10.0.**
- 08/2016 – 06/2019 **Nguyen Huu Huan High School,** Thu Duc City, Ho Chi Minh City, Vietnam.

HONORS & AWARDS

- 2022 **Certificate of Merit for Good Achievement in Scientific Research in 2022.**
- » Awarded by the Principal of University of Information Technology, VNU-HCM.
- 2021 **Advanced youth follow Uncle Ho's words in the field of Learning - Creativity – Scientific Research.**
- » Awarded by the Principal of University of Information Technology, VNU-HCM.
- Certificate of Merit from the President of VNU for students whose articles have been published in prestigious international journals of the industry, recognized by ISI.**
- » Awarded by the President of Vietnam National University Ho Chi Minh City.
- Certificate of Participation in the final round of Student Scientific Research Prize**
- » Awarded by the Secretary of Standing Committee of Ho Chi Minh Communist Youth Union of Ho Chi Minh city
- 2020 **Certificate of Merit for Good Achievement in Scientific Research in 2020.**
- » Awarded by the Principal of University of Information Technology, VNU-HCM.
- Certificate of Participation of Student Scientific Research Prize**
- » Awarded by the Secretary of Standing Committee of Ho Chi Minh Communist Youth Union of Ho Chi Minh city

SCIENTIFIC PROJECTS

- 2021 – 2022 **OBJECT DETECTION ON AERIAL IMAGES BASED ON RANDOM CROPPING DATA AUGMENTATION METHOD**

- » **Description:** The research focus on exploring data augmentation techniques to boost the performance of object detection methods on aerial images.
- » **Location:** Ho Chi Minh City, Vietnam
- » **Type:** Student Scientific Research Project
- » **Client:** Faculty of Computer Science, University of Information Technology, VNU-HCM
- » **Role:** Principal Investigator.

2021 – 2022 **AN APPROACH TO THE PROBLEM OF RECOGNIZING VIETNAMESE RECEIPTS**

- » **Description:** This project aims to propose an effective approach that extracts information from Vietnamese receipts. Four types of information are interested in this project: seller, address, total cost, and timestamp.
- » **Location:** Ho Chi Minh City, Vietnam.
- » **Type:** Scientific Research Project University-level
- » **Client:** Faculty of Computer Science, University of Information Technology, VNU-HCM
- » **Role:** Participant.
- » **Position:** Researcher.

2021 – 2023 **DETECTING OBJECTS IN IMAGE DOCUMENTS USING DEEP LEARNING NETWORKS**

- » **Description:** This project aims to explore the performance of advanced object detectors in page object detection problems. Besides, the project also proposes an object detection method to improve the performance of the UIT-DODV dataset.
- » **Location:** Ho Chi Minh City, Vietnam
- » **Type:** Scientific Research Project VNU-HCM C-level
- » **Client:** Vietnam National University Ho Chi Minh city
- » **Role:** Participant.
- » **Position:** Researcher.

2019 – 2020 **FACE EMOTION RECOGNITION USING DEEP LEARNING METHODS.**

- » **Description:** This project aims to fine-tune and propose the CNN model for facial emotion recognition, which is modeled as an emotion classification problem.
- » **Location:** Ho Chi Minh City, Vietnam.
- » **Client:** Faculty of Computer Science, University of Information Technology, VNU-HCM.
- » **Role:** Principal Investigator.

PUBLICATIONS

International Articles

- 2022 **Doanh C. Bui**, Tam V. Nguyen and Khang Nguyen, "Transformer with Multi-level Grid Features and Depth Pooling for Image Captioning," Journal of Image and Vision Computing (Under review)

Khang Nguyen, **Doanh C. Bui**, Truc Trinh and Nguyen D. Vo, "EAES: Effective Augmented Embedding Spaces for Text-Based Image Captioning," in IEEE Access, vol. 10, pp. 32443-32452, 2022, doi: 10.1109/ACCESS.2022.3158763.

Khang Nguyen, Phuc Nguyen, **Doanh C. Bui**, Minh Tran and Nguyen D. Vo, "Analysis of the Influence of De-hazing Methods on Vehicle Detection in Aerial Images" International Journal of Advanced Computer Science and Applications(IJACSA), 13(6), 2022. <http://dx.doi.org/10.14569/IJACSA.2022.01306100>

National Articles

- 2022 **Doanh C. Bui**, Nguyen D. Vo, and Khang Nguyen, "DLAFS CASCADE R-CNN: AN OBJECT DETECTOR BASED ON DYNAMIC LABEL ASSIGNMENT", JCC, vol. 38, no. 2, p. 131–145, Jun. 2022.

Bao Tran Nguyen, Tai Pham Tan, **Doanh C. Bui**, Nguyen D. Vo, Khang Nguyen, "The object detection by the combination of generic roi extractor and dynamic r-cnn with side-aware boundary localization in aerial images", CTUJS (accepted).

Proof: [Google Drive Link](#)

Nguyen Thanh Thanh Truc, Tran Thi My Quyen, **Doanh C. Bui**, Nguyen D. Vo and Khang Nguyen, "Experimental evaluation of Double-Head method for vehicle detection in aerial images problem", CTUJS (accepted).

Proof: [Google Drive Link](#)

Doanh C. Bui, Truc Trinh, Thuan Trong Nguyen, Duc-Vu Nguyen, Nguyen D. Vo, "VieCap4H Challenge 2021: A transformer-based method for Healthcare Image Captioning in Vietnamese", VNU Journal of Science: Computer Science and Communication Engineering (accepted).

Proof: [Google Drive Link](#)

CONFERENCES & PRESENTATIONS

International Conferences

- 2022 Bao G. Do, **Doanh C. Bui**, Nguyen D. Vo and Khang Nguyen, "A Multi-Scale Approach for Vietnamese Image Captioning in Healthcare Domain", NAFOSTED Conference on Information and Computer Science (NICS), 2022 (accepted).

Proof: [Google Drive Link](#)

Minh Dinh, Vu L. Bui, **Doanh C. Bui**, Long Phi Duong, Nguyen D. Vo and Khang Nguyen, "Performance Evaluation of Optimizers for Deformable-DETR in Natural Disaster Damage Assessment", 2022 5th International Conference on Multimedia Analysis and Pattern Recognition (MAPR), 2022 (accepted).

Proof: [Google Drive Link](#)

Doanh C. Bui, Nguyen Nghia, Nguyen D. Vo, Uyen Han Thuy Thai, Khang Nguyen, "Vi-DRSNet: A Novel Hybrid Model for Vietnamese Image Captioning in Healthcare Domain", 2022 5th International Conference on Multimedia Analysis and Pattern Recognition (MAPR), 2022 (accepted).

Proof: [Google Drive Link](#)

Le Viet Thinh, Van Nguyen Ngoc Huyen, **Doanh C. Bui**, Phuong Vo, Nguyen D. Vo and Khang Nguyen, "Empirical Study of RepPoints Representation for Object Detection in Aerial Images," 2022 IEEE Ninth International Conference on Communications and Electronics (ICCE), 2022, pp. 337-342, doi: 10.1109/ICCE55644.2022.9852099.

- 2021 **Doanh C. Bui**, Truc Trinh, Nguyen D. Vo and Khang Nguyen, "An Augmented Embedding Spaces approach for Text-based Image Captioning," 2021 8th NAFOSTED Conference on Information and Computer Science (NICS), 2021, pp. 172-176, doi: 10.1109/NICSS54270.2021.9701576.

Doanh C. Bui, Dung Truong, Nguyen D. Vo and Khang Nguyen, "MC-OCR Challenge 2021: Deep Learning Approach for Vietnamese Receipts OCR," 2021 RIVF International Conference on Computing and Communication Technologies (RIVF), 2021, pp. 1-6, doi: 10.1109/RIVF51545.2021.9642128.

National Conferences (in Vietnam)

- 2021 My H. Nguyen, **Doanh C. Bui**, Nguyen D. Vo, Khang Nguyen, "Survey on the efficiency of IoU and L1 loss on vehicle detection problem in aerial images using DETR", 2021 National Conference on Fundamental and Applied IT Research (FAIR), 2021, doi: 10.15625/vap.2021.0051.

- 2020 Ngoc Ho, Mai Pham, **Doanh C. Bui**, Truc Trinh, Nguyen D. Vo, Khang Nguyen, "Traffic vehicle detection in major city centers with YOLOv4", Some selected issues of Information and Communication Technology, Quang Ninh, Vietnam, 2020.

Doanh C. Bui, Nguyen D. Vo, Khang Nguyen, "A Deep Learning approach for facial emotion recognition", Some selected issues of Information and Communication Technology, Quang Ninh, Vietnam, 2020.

VOLUNTEER WORKS

- 2020 **Spring volunteer**, University of Information Technology.

2019 **Blood donation volunteer**, organized by Faculty of Information System, University of Information Technology.

2017 – 2018 **Secretary** of the Youth Union of Nguyen Huu Huan high school.

SKILLS & SUPPORTING TOOLS

Language:	<i>Listening</i>	<i>Speaking</i>	<i>Reading</i>	<i>Writing</i>
» Vietnamese	<i>Native</i>	<i>Native</i>	<i>Native</i>	<i>Native</i>
» English (IELTS 6.5)	<i>Intermediate</i>	<i>Intermediate</i>	<i>Fluent</i>	<i>Fluent</i>
Coding:	» C/C++ (proficient, 2+ years) » Python (proficient, +3 years) » Javascript (intermediate): React Native			
Computer Vision:	» OpenCV » NVIDIA CUDA			
Machine Learning:	» Sklearn, TensorFlow, PyTorch » Pandas, Seaborn, Matplotlib » Flask, FlaskAPI			
Database:	» MySQL » Microsoft SQL			
Server	» Linux, Bash, Docker			

CERTIFICATION

I certify that (1) to the best of my knowledge and belief, this CV correctly describes me, my qualifications, and my experience; and (2) that I am available for the assignment for which I am proposed.

Date: September 25, 2022

Bui Cao Doanh