

# NGOC-VUONG HO

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## RESEARCH INTERESTS

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My research interests include the areas of machine learning, deep learning and artificial intelligence. I am passionate about Computer Vision, Image/Video Processing, Machine Learning and Information Retrieval.

## EDUCATION

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**University of Information Technology (UIT- VNUHCM)** August 2016 - November 2020  
Bachelor of Science in Computer Science. GPA: 8.04/10.00

## PUBLICATIONS

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[1] Point-Unet: A Context-aware Point-based Neural Network for Volumetric Segmentation (*Under review at CVPR 2021, please contact me for get my paper*)

## RESEARCH EXPERIENCE

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**VinAI Research** April 2020 - Present  
*AI Research Resident* Vietnam  
Research focus on Medical imaging, Brain Tumor Segmentation with 3D image  
Mentor: [Binh-Son Hua](#) (VinAI Research), [Ngan T.H. Le](#) (University of Arkansas)

## WORK EXPERIENCE

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**VCCorp Corporation** June 2019 - April 2020  
*Machine Learning Engineer* Ho Chi Minh, Vietnam  
Building **Lotus** social network for Vietnamese people. Check and detect images and videos containing depraved content, violence, face recognition. R&D model of image and video classification.  
Language/Framework: **Python/TensorFlow, PyTorch, Keras**

**Eplatform Solution** June 2018 - March 2019  
*Machine Learning Engineer* Ho Chi Minh, Vietnam  
Analyze the construction drawing images, convert it from 2D images into 3D.  
Language/Framework: Python/TensorFlow, Chainer

**FPT Software Ho Chi Minh, Vietnam** March 2017 - May 2018  
*Intern Learning Engineer* Ho Chi Minh, Vietnam  
Developing model of lung, muscle, fat segment ... in CT image. Analysis, processing and visualization of CT image data.  
Language/Framework: Python/TensorFlow

## PROJECTS

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**Self-driving car** August 2017  
Design of mini-self-driving cars, running in real environment Using machine learning to detect lanes, traffic signs, obstructions, thereby making decisions about speed, steering angle. [ [Video demo](#) ].

**Document Layout Analysis** July 2018  
Designing a system/algorithm to analyze the layout of the Vietnamese, English document image (respect to the magazine). Identify and localize areas of text, tables, statistical charts, and images... And the description for the object of them. [ [Video demo](#) ].

**Segmentation of Lungs from Chest X-Ray** March 2019  
I designed an automatic lung segmentation system in the chest X-ray. Since then assess the health status of patients. The accuracy of the current test set is over 98%. Development based on the paper [Fully Convolutional Networks for Semantic Segmentation](#). [ [Video demo](#) ]

## Face detection and recognition

January 2019

Building a facial recognition system, taking attendance in buildings, apartments, and classrooms. The system can work well for about 100 people. The system uses deep learning. Requires quick training when new people are added. I used one-shot learning, few-shot learning, CNN ... [ [Video demo](#) ]

## Detect object broken

May 2018

Detecting broken products when passing on conveyor belts in industrial plants. I have built a deep learning model architecture. Research the solution method.

## HONOR AND AWARD

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Top 12/65 Zalo AI Hackathon with The Nine Dash Line Detector Challenge	2019
Candidate of Southeast Asia Machine Learning School in Indonesia [ <a href="#">CERTIFICATE</a> ]	2019
Candidate of Google I/O EXTENDED VIETNAM [ <a href="#">CERTIFICATE</a> ]	2019
Candidate of Statistical learning "bagging, boosting, SVM, introduction to neural networks" by Vietnam Institute for Advanced Study in Mathematics [ <a href="#">CERTIFICATE</a> ]	2019
Top 25 Tech Debate for Students[ <a href="#">CERTIFICATE</a> ]	2019
Top 10/176 in the Document Layout Analysis - Cinnamon AI Marathon [ <a href="#">CERTIFICATE</a> ]	2019
Top 8/876 in the Digital race Driverless in 2017 -2018 by FPT Corporation [ <a href="#">CERTIFICATE</a> ]	2018
Top 3 southern region Vietnam in the Digital race Driverless in 2017 2018	2018
Participate in Programming contest organized by Samsung	2017

## SKILLS

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<b>Programming Languages</b>	Python(proficient), C++
<b>Platforms</b>	Linux, Windows
<b>Languages</b>	English, Vietnamese
<b>Other</b>	OpenCV(proficient), Tensorflow, Keras, Chainer, PyTorch, Latex(familiar)