

## PERSONAL INFORMATION

### Tuan-Anh Bui

📍 Temasek Lab, SUTD, Room 3.719, 8 Somapah Road, Singapore

☎ (+65) 87415814

✉ [bta1489@gmail.com](mailto:bta1489@gmail.com); [tuananh\\_bui@sutd.edu.sg](mailto:tuananh_bui@sutd.edu.sg)

🌐 [tuananhbui89.github.io](https://tuananhbui89.github.io)

💬 Skype [tuananhbui89](#)

🌐 LinkedIn [tuananhbui89](#)

*"If you want to live a happy life, tie it to a goal, not to people or things" - Albert Einstein*

## OBJECTIVE

With strong experience on the industrial environment, I would like to bring a knowledge from academic to the real life through technological products, esp. using AI, Computer Vision to improve daily, common activities, to make the world to be a better place. I realize that pursuing Ph.D. is the must-do path to deepen my knowledge and improve the research methodology for this goal.

## RESEARCH BACKGROUND

Generative Adversarial Network, Detection and Tracking Moving Object, Image Retrieval, Compression

Digital Signal Processing, Audio Processing (Viettel)

## EDUCATION

09/2007–06/2012

### **Hanoi University of Science and Technology, Hanoi, Vietnam (HUST)**

*BSc in Electronics and Telecommunications, Honour program, Talented class*

Thesis title: "Research on optimal trade-off between power saving and QoS"

Thesis grade: 4/4 (10/10) (Best Thesis Award)

GPA: 8.44/10 (top 5% of SET Students, Merit for Excellent Graduate Student)

08/2004–06/2007

### **Le Hong Phong Gifted High School, Namdinh, Vietnam**

*High school Diploma, Physics Talented class*

Got a Second prize in National Physics Olympiad for High School Students.

## WORKING EXPERIENCE

03/2017 – Present

### **Research Assistant**

*Temasek Lab, Singapore University of Technology and Design, Singapore*

Projects:

- Model compression, esp. in Recurrent Neural Network (RNN) and Long-Short Term Memory (LSTM), to reducing memory and computational cost, to apply on mobile hardware such as FPGA.
- Implemented module to detect and track Undefined Flying Objects, esp. Drone in Sky Surveillance - Flying Object Detection (SSFOD) project.
- Improved image retrieval module to handle big dataset (approximate. 200k images) in Urban-area Scene Based Localization (USBL) project.

Research papers:

- Ngoc-Trung Tran, **Tuan-Anh Bui**, Ngai-Man Cheung, "Generative Adversarial Auto-Encoder Network", Paper Accepted to European Conference on Computer Vision 2018 (ECCV).
- Ngoc-Trung Tran, Dang-Khoa Le Tan, Anh-Dzung Doan, Thanh-Toan Do, **Tuan-Anh Bui**, Ngai-Man Cheung, "On-device Scalable Image-based Localization", under submission to Transaction on Image Processing, arXiv:1802.03510.

07/2012 – 03/2017

### **Digital Signal Processing Engineer**

*Viettel R&D Institute, Viettel Group, Hanoi, Vietnam*

- Developed baseband processing algorithms: Channel equalization using adaptive filter, Adaptive Noise Cancellation, Digital Pre-Distortion to improve the linearity of radio amplifiers.
- Developed auto-control and measuring system for qualification and testing in manufacture.
- Won the internal contest, one of three best projects at Viettel for Developing and Manufacturing Viettel SDR Handheld Radio project, 2016.
- Got a Creative Idea Award at Viettel for Research and Management, 2012-2015.

05/2010 – 06/2012

### **Research Assistant**

*Green Networking Lab, Hanoi University of Science and Technology, Vietnam*

- Study on Openflow, Software Defined Networking, Traffic engineering, Energy consumption model, data centre network.
- Research on methods for reducing energy consumption in data centre network.
- Got a Third prize on Student Conference on Scientific Research.

### **HONOURS & AWARDS**

---

- 2016, **Top 3, Best project** at Viettel.
- 2012-2015, **Creative Idea Award for Research and Management** at Viettel R&D Institute.
- 2012, **Merit for excellent graduate student**, HUST.
- 2012, **Best Thesis Award** in Thesis Defence, SET, HUST.
- 2012, **Third prize** in Student Conference on Scientific Research.
- 2007, **Second prize** in National Physics Olympiad for High School Students.

### **REFERENCES**

---

#### **Assistant Professor Ngai-Man Cheung, Ph.D. (Supervisor)**

Department of Information Systems Technology and Design  
Singapore University of Technology and Design  
E-mail: ngaiman\_cheung@sutd.edu.sg

#### **Doctor Thu-Huong Truong, Ph.D. (Supervisor)**

School of Electronics and Telecommunications  
Hanoi University of Science and Technology  
E-mail: huong.truong@hust.edu.vn

#### **Mr. Hoang Nguyen (Manager)**

Institute of Communication and Electronic Warfare  
Viettel R&D Institute, Viettel Group  
E-mail: hoangnc1@viettel.com.vn