

# Thanh-Danh NGUYEN

M.Sc., Computer Science Researcher

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Portfolio: danhntd.github.io

## BIOLOGY

**Danh Nguyen** obtained his M.Sc and B.Sc. (Honors) Degrees in Computer Science from University of Information Technology (UIT), Vietnam National University Ho Chi Minh City (VNUHCM) in 2024 and 2021, respectively. He currently works as a computer science researcher at the Laboratory of Multimedia Communications, UIT, VNUHCM. Prior to that, he contributed to Sugimoto Lab., City Science Lab., and VietAI Organization as a research intern, data science engineer, and teaching assistant, respectively. His research projects are under the supervision of Dr. Tiep Nguyen and Prof. Tam V. Nguyen.

**Research Interests.** Computer Vision and Applications, Deep Learning, and Data Science.

## EDUCATION

**University of Information Technology, VNUHCM**

M.Sc. in Computer Science

Thesis: Camouflage Instance Segmentation via Highly-Distinguished Features

HCMC, Vietnam

Dec 2021–Dec 2023

B.Sc. in Computer Science (Honors)

Thesis: Semantic Image Segmentation in the Dark with Domain Adaptation Method

Aug 2017–Apr 2021

## EXPERIENCE

**MMLab., University of Information Technology, VNUHCM - *mmlab.uit.edu.vn***

Researcher

Undergraduate Research Assistant

HCMC, Vietnam

Jun 2021–present

Aug 2019–Jun 2021

- Research Computer Vision and its applications:
  - \* Semantic scene understanding, instance segmentation
  - \* Low-shot learning for object detection and instance segmentation
  - \* Conditional image generation and reconstruction
- Host and join academic research projects
- Give lectures on Computer Vision, Deep Learning and Applications

**VietAI Organization - *vietai.org***

Teaching Assistant

Vietnam

Oct 2021–present

- Operate AI courses: A-Star Bootcamp for Startups, Machine Learning, Train-the-Trainer, Advanced Computer Vision, etc.

**Sugimoto Lab., National Institute of Informatics, Japan - *dgcvi.nii.ac.jp***

Research Intern

Tokyo, Japan

Mar 2023–Sep 2023

- Medical Image Instance Segmentation with Contrastive Learning (Advisors: Prof. Akihiro Sugimoto and Dr. Nghia Le)

**City Science Lab. @Ho Chi Minh City - CSL@HCMC**

Data Science Engineer

HCMC, Vietnam

Apr 2021–Oct 2022

- Collaborate with MIT Media Lab., L3-Cities Team to apply Cityscope Urban Analytics Technology to HCMC
- In charge of backend process for Urban Indicators Analytics

## SELECTED PUBLICATIONS

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1. **Thanh-Danh Nguyen**, Bich-Nga Pham, Trong-Tai Dam Vu, Vinh-Tiep Nguyen, Thanh Duc Ngo, and Tam V. Nguyen. “InstSynth: Instance-wise Prompt-guided Style Masked Conditional Data Synthesis for Scene Understanding.” *2024 International Conference on Multimedia Analysis and Pattern Recognition (MAPR)*. IEEE, 2024. (Scopus)
2. **Thanh-Danh Nguyen\***, Anh-Khoa Nguyen Vu\*, Nhat-Duy Nguyen\*, Vinh-Tiep Nguyen, Thanh Duc Ngo, Thanh-Toan Do, Minh-Triet Tran, and Tam V. Nguyen, “The Art of Camouflage: Few-shot Learning for Animal Detection and Segmentation”, *IEEE Access*, Jul 2024. IF = 3.4 (SCIE, Q1)
3. **Thanh-Danh Nguyen**, Nguyen Phan, Tam V. Nguyen, Vinh-Tiep Nguyen, and Minh-Triet Tran, “Nighttime Scene Understanding with Label Transfer Scene Parser”. (under review)
4. Sy-Tuyen Ho, Manh-Khanh Ngo Huu, **Thanh-Danh Nguyen**, Nguyen Phan, Vinh-Tiep Nguyen, Tam V. Nguyen, Thanh Duc Ngo, and Duy-Dinh Le, “APGAN: Abstraction-Perception Preserving Cartoon Face Synthesis”, *Multimedia Tools and Applications*, Mar 2023. IF = 2.577 (SCI, Q1)
5. Xuan-Duong Nguyen, Anh-Khoa Nguyen Vu, **Thanh-Danh Nguyen**, Nguyen Phan, Bao-Duy Duyen Dinh, Nhat-Duy Nguyen, Tam V. Nguyen, Vinh-Tiep Nguyen, and Duy-Dinh Le, “Adaptive multi-vehicle motion counting”, *Signal, Image and Video Processing*, Apr 2022. IF = 2.157 (SCIE, Q2)

Please visit my portfolio for the full list ([danhntd.github.io/research.html](https://danhntd.github.io/research.html))

## AWARDS AND HONORS

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- **Best Student Paper Award** at 2023 International Conference on Multimedia Analysis and Pattern Recognition (MAPR)
- Master, PhD Scholarship Programme of **Vingroup Innovation Foundation - VinIF**, code VINIF.2022.ThS.104, in 2022
- Two scholarships for Excellence of **Pony Chung Foundation** in 2019 and 2020
- **Consolation Prize** in AI City Challenge Ho Chi Minh City 2020: Vehicle Motion Counting [5]
- Scholarship for Excellence of BIDV Corp. in 2018
- Scholarships for Excellence in GPA (top 8% of students): Under-graduate (2019-2021) and Post-graduate (2022-2023)

## SKILLS

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- Computer Vision, AI, Machine Learning, Deep Learning
- Python, PyTorch, Tensorflow, and Linux server techniques
- Research and teaching skills
- Foreign language: English (IELTS 6.5)

## REFERENCES

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- **Dr. Tiep Nguyen**  
*Head of MMLab., University of Information Technology, VNUHCM, HCMC, Vietnam*  
Contact: [tiepvnv \(at\) uit.edu.vn](mailto:tiepvnv@uit.edu.vn)
- **Assoc. Prof. Tam V. Nguyen**  
*Founder of Vision and Mixed Reality Lab., University of Dayton, Dayton, OH 45469, United States*  
Contact: [tamnguyen \(at\) udayton.edu](mailto:tamnguyen@udayton.edu); website: [vantam.github.io](https://vantam.github.io)