Tuyen Tran

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EDUCATION

Applied Institute of Artificial Intelligence, Deakin University — VIC, Australia
Ph.D. in Computer Science — March 2022 – Present
- Thesis: Dynamic Cross-Modal Reasoning for Instance-Level Perception in Videos

University of Engineering and Technology – Vietnam National University — Hanoi, Vietnam
Bachelor of Electronics and Communications — August 2015 – June 2019
- GPA: **3.73/ 4.00 (Ranked 1st in the department)**
- Thesis: Variable Precision Computation Unit for DNN. Grade: **(9.6/10, Best Graduation Thesis Award)**

Hanoi - Amsterdam High School for The Gifted — Hanoi, Vietnam
Specialized in mathematics — August 2012 - June 2015

SELECTED PUBLICATIONS

1. **Tuyen Tran**, Thao Minh Le, Le Hung, & Truyen Tran (2025). Planner-Refiner: Dynamic Space-Time Refinement for Vision-Language Alignment in Videos. *European Conference on Artificial Intelligence (ECAI).*
2. **Tuyen Tran**, Thao Minh Le, & Truyen Tran (2025). Towards Agentic AI for Multimodal-Guided Video Object Segmentation. *MMFM4: The 4th Workshop on What is Next in Multimodal Foundation Models? at ICCV 2025.*
3. **Tuyen Tran**, Thao Minh Le, Hung Tran, & Truyen Tran (2024). Unified Framework with Consistency across Modalities for Human Activity Recognition. *British Machine Vision Conference (BMVC).*
4. **Tuyen Tran** (2024). The 2nd Solution for LSVOS Challenge RVOS Track: Spatial-temporal Refinement for Consistent Semantic Segmentation. *Large-scale Video Object Segmentation ECCV 2024 Workshops.*

SELECTED HONORS AND AWARDS

- Second Place Award in the 6th LSVOS Challenge, ECCV2024.
- Second Place Award in the 1st OmniLabel challenge, CVPR2023, with $3,300 USD prize
- Deakin University Postgraduate Research Scholarship (DUPR) – Awarded by Deakin University, Australia (2022).
- Samsung Talented Program (STP) Scholarship, awarded by Samsung Electronics Vietnam.
- Fighting Spirit Award and Travel Grant as a Finalist in the 22nd LSI Design Contest, Okinawa, Japan (2019).
- Merit-based Scholarship for Top 5% Academic Excellence, covering full tuition and living expenses (2015–2019).

WORKING EXPERIENCE

Applied Institute of Artificial Intelligence, Deakin University — VIC, Australia
Research Assistant — March 2025 – Present
Developing multimodal machine learning methods for 3D medical image parsing.

Vin Big Data Institute (Vingroup) — Hanoi, Vietnam
AI Engineer — October 2020 – December 2021
Developed an AI-integrated controller module for autonomous vehicle navigation, as part of Vingroup's Autopilot project.

Signals and Systems Laboratory (UET – VNU)   Hanoi, Vietnam
Research Assistant   June 2019 – October 2020
Conduct fundamental research on matrix computation to develop efficient algorithms to segment crack-like objects from the images collected by the UAV.

TEACHING EXPERIENCE

Faculty of Electronics and Telecommunications (UET – VNU)   Hanoi, Vietnam
Teaching Assistant   Fall 2019 & Spring 2020
- Course: Digital Signal Processing, Signals and Systems, Python programming, Analog Electronic Engineering Practice and Digital Electronic Engineering Practice.
- Responsibilities: Led weekly tutorials and office hours, designed assessment scheme, graded assignments and examinations.

TECHNICAL SKILLS

General Technical Skills: Proficient in Python, Bash scripting, Git, Latex and Linux CLI; experienced with large-scale processing and high-performance computing (HPC) environments.
Deep Learning Skills: Hands-on experience with PyTorch, Hugging Face, SmolAgent for agentic AI, LLM Serving & Deployment; skilled in distributed training and working with large-scale multimodal datasets.
Research Execution: Well-developed ability to independently transform ideas into publication-ready manuscripts.

REFERENCES

Prof. Truyen Tran — PhD Supervisor
Head of AI, Health and Science, Deakin University

Dr. Thao Le — PhD Supervisor
Assistant Professor, Pennsylvania State University, Great Valley, USA

Dr. Vuong Le — PhD Supervisor
Senior Machine Learning Scientist, Amazon Australia

Prof. Xuan-Tu Tran — BSc Thesis Supervisor
Director, VNU Information Technology Institute (VNU-ITI)

Dr. Le Vu Ha — Research Advisor
Head of Signals and Systems Laboratory, Faculty of Electronics and Telecommunications,
VNU University of Engineering and Technology