Huy Anh Nguyen

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Education

Ph.D. in Computer Science 08/2023 – Present
University of Adelaide, SA, Australia & Stony Brook University (transferred)

- Member of **Be and Beyond Visual Intelligence Lab** and **Computer Vision Lab**
- Advisor (M.Sc. and Ph.D.): Prof. Minh Hoai Nguyen, Co-adviser Assoc. Prof. Feras Dayoub

M.Sc. in Computer Science (Data Science Engineering) 02/2021 – 08/2023
Stony Brook University, New York, U.S.

- Thesis: Hand-held Object Segmentation and Tracking

B.Eng. with Honors in Mathematics and Informatics 08/2013 – 08/2018
Hanoi University of Science and Technology, Hanoi, Vietnam

- Thesis: New Classes of Operators and De Morgan Triples in Picture Fuzzy Set
- Advisor: Prof. Dr. Sc. Bui Cong Cuong

Research Interests

Computer Vision	Egocentric Video Understanding, Temporal Action/Event Detection, Hand-Object Interaction, Video Object Segmentation (VOS)
Machine Learning	Representation Learning, Self-Supervised Learning

Research Experiences

University of Adelaide - *Ph.D. Researcher* (SA, Australia) 08/2024 – Present

- **Temporally Precise Hand Touch Detection:** Developing algorithms and datasets to spot and localize hand–object touch events in egocentric videos with tight temporal tolerances. Published at CVPR Findings 2026.

Stony Brook University - *Graduate Researcher* (New York, U.S.) 01/2022 – 08/2024

- **Hand-held Object Identification, Segmentation, and Tracking:** Processed and curated the Epic-Kitchens VISOR dataset for hand-held object segmentation and tracking. Developed a VOS method improving upon STCN with a novel contact region loss. The dataset pipeline, contact region loss, and comprehensive evaluation of competing methods contributed to HOIST-Former, published at CVPR 2024.
- **Adaptive and Interactive AI-AR Task Assistance** (Funded by DARPA)**:** Developed Unity and ROS plugins for data streaming from HoloLens 2, with a rospy client achieving 12 fps for RGB and 5 fps for Depth streams with 200–400ms latency. The system feeds data into action, hand, and active object recognition modules. Also developed hand-object segmentation, tracking, and distance estimation models using synchronized RGB-D frames.
- **Visual Attention: Toward an Attentional Toolkit** (Funded by NSF)**:** Developed a multi-device synchronized data collection system integrating a webcam, screen recording, and eye-gaze video from a GP3 tracker, achieving sub-120ms latency across all streams for accurate gaze-action alignment in cognitive science research.

Hanoi University of Science and Technology - *Undergraduate Researcher* (Hanoi, Vietnam) 01/2018 – 09/2018

- **Fuzzy Logic Research:** Proved De Morgan triples and constructed new classes of picture fuzzy negation operators. Presented findings at National Mathematical Conference (2018).

Publication & Presentation

[1] **Huy Anh Nguyen**, Feras Dayoub, Minh Hoai, *"Detecting Precise Hand Touch Moments in Egocentric Video"*, IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) Findings, 2026. (To appear)

[2] Huy Vu, **Huy Anh Nguyen**, Adithya V Ganesan, Swanie Juhng, Oscar NE Kjell, Joao Sedoc, Margaret L Kern, Ryan L Boyd, Lyle Ungar, H Andrew Schwartz, Johannes C Eichstaedt, *"PsychAdapter: Adapting LLMs to Reflect Traits, Personality, and Mental Health"*, npj Artificial Intelligence, 2026.

[3] Supreeth Narasimhaswamy, **Huy Anh Nguyen**, Lihan Huang, Minh Hoai, *"HOIST-Former: Hand-held Objects Identification, Segmentation, and Tracking in the Wild"*, IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2024

[4] Nguyen Thanh Binh, **Huy Anh Nguyen**, Pham Ngoc Linh, Nguyen Linh Giang, Tran Ngoc Thang, *"Attentive RNN for HS Code Hierarchy Classification on Vietnamese Goods Declaration"*, International Conference on Intelligent System and Network (ICISN), 2021.

[5] **Nguyen Huy Anh**, Roan Thi Ngan, Bui Cong Cuong, *"Some new classes of Picture Fuzzy negation and De Morgan triples"*, 9th Vietnam Mathematical Congress, Oral presentation in Discrete mathematics section, Nha Trang, Vietnam, 2018.

Work Experiences

PIXTA Inc - ***Computer Vision Engineer Intern*** (Hanoi, Vietnam) 06/2021 – 08/2021

- Researched and developed Japanese image captioning models for stock images. Deployed BERTCap with ResNeST backbone into production at under 0.65s per image using ONNX.

CMC Institute of Science and Technology - ***Machine Learning Engineer*** (Hanoi, Vietnam) 06/2018 – 05/2020

- Developed a hierarchical classifier for HS Code prediction (68.9% full code, 95% chapter/heading accuracy) on 2TB+ customs data, published at ICISN 2021.

WorldQuant LLC - ***Research Consultant*** (Hanoi, Vietnam) 05/2019 – 09/2019

- Developed algorithmic models (‘alphas’) to predict stock market movements, utilizing 25 datasets. Gold medal in WorldQuant Challenge (global - 2018).

Teaching & Mentorship

- Mentored 2 undergraduate students in Summer Research at University of Adelaide (Summer 2024/25).
- Mentored student groups on final projects in CSE519 Data Science Fundamentals (Fall 2023).
- Teaching Assistant: CSE353 Machine Learning (Fall 2021), CSE519 Data Science Fundamentals (Fall 2023), CSE538 Natural Language Processing (Spring 2024).

Awards & Scholarships

- University of Adelaide Research Scholarship (UARS) 2024 – Present
- Centre for Augmented Reasoning (CAR) PhD Scholarship, University of Adelaide 2024 – Present

Skills

Languages	Python, SQL, C++, C#, Java
Tools/ Frameworks	PyTorch, Numpy, Pandas, TensorFlow/Keras, Scikit-learn, Git, ROS, FreeFEM Linux, Hadoop/Spark, FastAPI, ONNX, Docker