

Thanh-Tin Nguyen - AI Researcher

Contact Information

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Research Interest

- **Embodied AI:** Let the robot navigate towards a goal by complicated instructions.
 - **Multimodal Analysis:** Using Knowledge Graph/Neuro-symbolic to reason about the world.
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Education

Auburn University, Alabama, USA.

August. 2022 - Present

- **Graduate Teaching Assistant** in Computer Science and Software Engineering.
- **Research** in Robust & Explainable AI.
- **Advisor:** Prof. Anh Nguyen.

Sejong University, Seoul, Korea.

Sep. 2020 - August. 2022

- **M.Sc.** in Computer Science and Engineering.
- **Thesis:** *Fusion Networks for Language Grounding in Navigation Task*.
- **Advisor:** Prof. Kim Yong Guk.

Ho Chi Minh University of Science, Ho Chi Minh, Vietnam.

Sep. 2015 - August. 2019

- **B.A.** in Computer Vision and Robotics.
 - **Thesis:** *A New Framework of Moving Object Tracking based on Object Detection - Tracking with Removal of Moving Features using Stereo Camera and IMU*.
 - **Advisor:** Prof. Ly Quoc Ngoc.
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Technical Skills

- **AI:** Computer Vision, Deep Learning, Reinforcement Learning.
 - **C/C++:** I learned this in my Bachelor, this language helped me to create my first game program with the help of Object-Oriented Programming, and it also helped me to get an internship at Gameloft Corp. One of my highlight programs using this language is "**Multiple Object Tracking**" which has a lot of stars on **GitHub**
 - **Python:** For now, I am using it for constructing AI (Computer Vision, NLP, Deep Learning, Reinforcement Learning, etc) programs, this language has some libraries that I am using daily such as Pytorch (C++, Lightning), Tensorflow, PyQt. I also have experience in Git, Linux, Windows, SQL, ROS, and Edge devices.
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Languages

- **Vietnamese:** Native
 - **English:** Fluent
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Work Experience

- **AI Engineer**
AIOZ Company, Ho Chi Minh City, Vietnam.
Implementations for various projects such as:
 - Instance Segmentation to detect staff in a store.
 - Face Recognition to re-identify customers of a store.
 - License Plate Recognition for a car parking.

May. 2019 - May. 2020

- **AI Engineer Intern** Mar. 2018 - Mar. 2019
Gumi Company, Vietnam.
 - Line Segmentation for handwritten text.
 - Optical Character Recognition (OCR) for Japanese bills and documents.
 - **Game Programmer Intern** Jun. 2017 - Oct. 2018
Gameloft Company, Vietnam.
I was a game developer intern here. Doing an arcade game using Cocos-2dx.
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Journals (Selected)

1. **Nguyen Thanh Tin**, Anh H. Vo, Soo-Mi Choi, Kim Yong Guk. “**Coarse-To-Fine Fusion for Language Grounding in 3D Navigation**”. *Knowledge-based Systems (KBS)*, 2023. [\[Paper\]](#)[\[Video\]](#)
 2. Long H. Nguyen, Nhat Truong Pham, Van Huong Do, Liu Tai Nguyen, **Thanh Tin Nguyen**, Van Dung Do, Hai Nguyen, Ngoc Duy Nguyen. “**Fruit-CoV: An Efficient Vision-based Framework for Speedy Detection and Diagnosis of SARS-CoV-2 Infections Through Recorded Cough Sounds**”. *Expert Systems with Applications (ESWA)*, 2021. [\[Paper\]](#)
 3. **Nguyen Thanh Tin**, Ly Quoc Ngoc, , Le Bao Tuan, “**A New Framework of Moving Object Tracking based on Object Detection-Tracking with Removal of Moving Features using Stereo Camera and IMU**”. *International Journal of Advanced Computer Science and Applications (IJACSA)*, 2020. [\[Paper\]](#)[\[Video 1\]](#)[\[Video 2\]](#)[\[Video 3\]](#)
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Challenges / Workshops (Selected)

1. **Thanh Tin Nguyen**. “**1st place in Predicting Deforestation Region in Indonesia Challenge**”. *Climate Change AI Challenge*, 2023. [\[Challenge\]](#)[\[Link project\]](#)[\[Code\]](#)
 2. **Thanh Tin Nguyen**, Nhat Truong Pham, Yong-Guk Kim, *et. al.*,. “**HCILab at Memotion 2.0 2022: Analysis of Sentiment, Emotion and Intensity of Emotion Classes from Meme Images using Single and Multi Modalities**”. *First Workshop on Multimodal Fact-Checking and Hate Speech Detection AAAI Workshop*, 2022. [\[Paper\]](#)[\[Link project\]](#)[\[Code\]](#)
 3. **Thanh Tin Nguyen**, Nhat Truong Pham, Ngoc Duy Nguyen, *et. al*, “**VieCap4H Challenge: Automatic image caption generation for healthcare domains in Vietnamese**”. **3rd** at *Proceedings of the 8th International Workshop on Vietnamese Language and Speech Processing*, 2021. [\[Paper\]](#)[\[Link project\]](#)[\[Code\]](#)
 4. Long H. Nguyen, Nhat Truong Pham, Van Huong Do, Liu Tai Nguyen, **Thanh Tin Nguyen**, Hai Nguyen, Ngoc Duy Nguyen. “**Fruit-CoV: An Efficient Vision-based Framework for Speedy Detection and Diagnosis of SARS-CoV-2 Infections Through Recorded Cough Sounds**”. **1st** at *AI CovidVN 115M Challenge: Covid Cough Detection Challenge*, 2021. [\[Paper\]](#)
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Honors / Awards

- **1st Prize in Climate Change AI challenge** June. 2023 - Sep. 2023
Building a segmentation model which is capable of detecting fire in Indonesia forests. Received \$200.
 - **1st Prize in AICovidVN challenge** July. 2021 - Sep. 2021
Introduced Fruit-CoV, a framework that is capable of detecting SARS-CoV-2 through cough sounds. Received 100mil VND (\$4300)
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Services and Activities

- **Teacher at K-6 AI Club** Aug. 2022 - Present
AI Club for children around the elementary-school age (K-6) to learn math, coding, robotics, and artificial intelligence. This is a completely FREE, voluntary, educational event.
Supported by Auburn University and an NSF CAREER award. Find out more at: [our website](#).
- **Programmer in an Educational Project** Jan. 2021 - Dec.2021
Develop an educational deep reinforcement learning framework at: [our website](#).