

# NGUYEN ANH MINH MAI

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## Skills

**Languages:** Vietnamese (Native), English (Fluent), French (Fluent)

**Knowledge:** Data Structures, Algorithms, OOP, Machine Learning, Computer Vision (camera & LiDAR), SLAM, ADAS

**Prog. Languages:** Python, C/C++, CUDA, bash, HTML/CSS, JavaScript, SQL

**Frameworks:** Pytorch, Keras/ TensorFlow, OpenCV, Scikit-learn, NumPy, SciPy, Pandas, ROS, PCL, TensorRT

**Developer Tools:** Git, Docker, Linux, VS Code, Doxygen, L<sup>A</sup>T<sub>E</sub>X

## Experience

### IRIT, CNRS & Cerema

Nov. 2019 – Jan. 2023

*PhD Student*

*Toulouse, France*

- Focusing on LiDAR-based/ camera-based 3DOD methods.
- Keywords: 3D object detection, Tracking, Segmentation, LiDAR, Linux, pytorch.

### VinAI Research

May 2021 – Dec. 2021

*Research Scientist*

*Vietnam*

- Implementing reproducing the SOTA LiDAR-based/ monocular-based 3DOD on waymo, nusenes datasets.
- Training & evaluating on our own large-scale datasets. Exporting & deploying the model on car products.
- Keywords: 3D Object Detection, LiDAR, Linux, CUDA, pytorch, tensorRT, Embedded Systems.

### CEA

Feb. 2019 – Aug. 2019

*Research Engineer Intern*

*Paris-Saclay, France*

- Fine detection and recognition of large-scale products using the 3D sensor Realsense d435.
- Targeted TensorRT optimization for embedded platforms Nvidia Jetson tx2, AGX Xavier.
- Keywords: 2D Object Detection, Linux, pytorch, tensorRT, Embedded Systems.

### MIA

Apr. 2018 – Jul. 2018

*Research Engineer Intern*

*La Rochelle, France*

- Reimplementing the SOTA 2DOD (YOLO v3) in tensorflow.
- Training & evaluating on our own datasets. Exporting & deploying the model on Raspberry PI 3/ TurtleBot 3
- Keywords: 2D Object Detection, Linux, tensorflow, Embedded Systems.

## Education

### Paul Sabatier Toulouse III University

Nov. 2019 – Jan. 2023

*Doctor of Philosophy - PhD, Computer Science*

*Toulouse, France*

### INSA Centre Val de Loire

Sep. 2014 – Sept. 2019

*Engineer's degree (a parallel "Master 2" degree), Engineering*

*Bourges, France*

## Publications

### Journals

- Nguyen Anh Minh Mai, Pierre Duthon, Louahdi Khoudour, Alain Crouzil, and Sergio A. Velastin, "3D Object Detection with SLS-Fusion Network in Foggy Weather Conditions," SENSORS — DOI: 10.3390/s21206711

### Conferences

- Nguyen Anh Minh Mai, Pierre Duthon, Pascal Housam SALMANE, Louahdi Khoudour, Alain Crouzil, Sergio A. Velastin, "Camera and LiDAR analysis for 3D object detection in foggy weather," ICPRS 2022
- Nguyen Anh Minh Mai, Pierre Duthon, Louahdi Khoudour, Alain Crouzil, Sergio A. Velastin, "Détection d'obstacles par vision et LiDAR par temps de brouillard pour les véhicules autonomes," ORASIS 2021
- Nguyen Anh Minh Mai, Pierre Duthon, Louahdi Khoudour, Alain Crouzil, Sergio A. Velastin, "Sparse LiDAR and Stereo Fusion (SLS-Fusion) for Depth Estimation and 3D Object Detection," ICPRS 2021, (received "Best Paper Award") — DOI: 10.1049/icp.2021.1442

## Additional Experience & Awards

### Certificates & Awards

- Best paper honorable mention, ICPRS 2021 (2021)
- PhD research scholarship, Cerema Research Center, France (2019)
- 2nd prize in mathematics (provincial competition of the best high school students), Hue, Vietnam (2014)
- 2nd prize in mathematics (provincial competition of the best college students), Hue, Vietnam (2011)
- 3rd prize in mathematics on pocket computer (provincial competition of the best college students), Hue, Vietnam (2010)
- Deep learning specifications Certificates (2017), Machine learning Certificates, Andrew Ng, Coursera (2016)

### Teaching

- Teaching assistant at Reinforcement Learning Virtual School (RLVS) hosted by ANITI, Toulouse, France 🌐
- "Introduction to Programming and Algorithms in Python" at the Paul Sabatier University (UPS), Toulouse, France