

# NGUYEN ANH MINH MAI

AI RESEARCH ENGINEER · COMPUTER SCIENCE MAJOR · PAUL SABATIER TOULOUSE III

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## ABOUT ME

**Knowledge:** Machine Learning, Deep Learning, Image Processing, Computer Vision (camera & LiDAR), ADAS.

**Programming Languages:** Python, C++, C, CUDA, Bash, SQL, HTML, CSS, Javascript.

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

**Developer Tools:** git, docker, SuperPOD, shell, tmux, vim, VS Code, Doxygen, L<sup>A</sup>T<sub>E</sub>X.

**Operating systems:** GNU/Linux, Microsoft Windows.

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

## EXPERIENCE

### IRIT, CNRS & Cerema & EasyMile

Nov. 2019 – now

*Research Engineer*

*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*

- Designing & implementing a LiDAR-based 3DOD on waymo challenge, nusenes datasets. 80.76% mAP on waymo 🐙
- Training & evaluating on our own large-scale datasets. Exporting & deploying the model on car products.
- Localization and mapping for navigation, Fast LOAM
- Keywords: 3D Object Detection, LiDAR, Linux, CUDA, pytorch, tensorRT, Embedded Systems., ADAS, SLAM.

### 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

2019 – 2022

*Doctor of Philosophy - PhD, Computer Science*

*Toulouse, France*

### INSA Centre Val de Loire

2014 – 2019

*Diplôme d'ingénieur (a parallel "Master 2" degree)*

*Bourges, France*

## PUBLICATIONS

- |  |      |
|--|------|
| "3D Object Detection with SLS-Fusion Network in Foggy Weather Conditions," SENSORS                       | 2021 |
| "Camera and LiDAR analysis for 3D object detection in foggy weather," ICPRS                              | 2022 |
| "Multimodal Sensor Fusion for 3D Object Detection for Autonomous Driving,"(poster) ITS European Congress | 2022 |
| "Sparse LiDAR and Stereo Fusion (SLS-Fusion) for Depth Estimation and 3D Object Detection," ICPRS        | 2021 |
| "Détection d'obstacles par vision et LiDAR par temps de brouillard pour les véhicules autonomes," ORASIS | 2021 |

## ADDITIONAL EXPERIENCE

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| Best paper honorable mention, ICPRS 2021   | 2021 |
| PhD research scholarship, Cerema Research Center, France   | 2019 |
| 2nd prize in math (provincial competition of the best high school students), Hue, Vietnam                | 2014 |
| 2nd prize in math (provincial competition of the best college students), Hue, Vietnam                    | 2011 |
| 3rd prize in math on pocket computer (provincial competition of the best college students), Hue, Vietnam | 2010 |
| Deep learning specifications Certificates, Andrew Ng, Coursera   | 2017 |
| Machine learning Certificates, Andrew Ng, Coursera   | 2016 |
| Teaching assistant at Reinforcement Learning Virtual School (RLVS) hosted by the ANITI Toulouse, France  | 2021 |
| Summer school: Document Analysis and Recognition at La Rochelle University, La Rochelle, France          | 2018 |