Maxime Noizet

Robotics engineer, Ph.D.

27 yo, driving license

Compiègne, France

noizetma.github.io

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Education

2021 2024	**PhD in Robotics** Université de Technologie de Compiègne, Sorbonne Universities Alliance (UTC)
2015 2020	**Computer Engineering** UTC *Specialization: Real-Time Systems and Embedded Computing*
2019 2020	**Master's Degree in Automatic Control and Robotics of Intelligent Systems** UTC

Courses

Nov. 2022	**Use of GNSS for Precision Positioning** ENSG
	Professional Certificate: IBM AI Engineering Coursera

Languages

French ●●●●●
English ●●●●◖
German ●●○○○
Japanese ●○○○○

Skills

Writing, Analysis, Autonomy, Adaptability, Collaboration, Project Management, Communication, Dissemination, Teaching, Popularization

References

Dr. Philippe XU
philippe.xu@ensta-paris.fr

Pr. Philippe BONNIFAIT
philippe.bonnifait@hds.utc.fr

Dr. Jean-Benoist Léger
jbleger@hds.utc.fr

Experience

Jan. 2025 July 2025	**CNRS Research Engineer** Robotic Perception and Localization	Heudiasyc, CNRS
July 2021 Dec. 2024	**CNRS PhD Candidate in Robotics** *Multi-sensor perception with vector maps for autonomous vehicle localization*	Heudiasyc, CNRS, UTC

- ★ Contribution: Novel methods for automated multimodal annotation of images and lidar data
- ★ Adaptation of computer vision algorithms for LiDAR point cloud classification and road feature detection in images
- ★ Multi-sensor fusion of GNSS, lidars, cameras, and georeferenced vector maps for robust localization in complex environments
- ★ Additional activities: Supervision of student projects in computer vision and teaching of statistics

Nov. 2020 June 2021	**CNRS Research Engineer** Localization integrity for autonomous vehicles, development of a 1D approximation module for data fusion	Heudiasyc, CNRS
Feb. - Oct. 2020	**Research Engineer Intern** Long-term trajectory prediction for detected vehicles in complex urban environments	Renault Group, UTC
Sept. 2018 Feb. 2019	**Assistant Engineer Intern** Development of a visual programming feature for a CAD data optimization software	PiXYZ Software

Technical skills

General	Computer vision, machine learning, robotics, multi-sensor fusion, statistics, numerical analysis, real-time software, embedded systems
Languages	Python, C++, C, LaTeX, R, Matlab, Assembly, UML, SQL
Technologies	Git, Docker, Numpy, Scipy, Pandas, Scikit-learn, Scikit-image, OpenCV, Jupyter, Pytorch, Tensorflow, ROS, Eigen, PCL, Qt, Cython

Projects

2021-2024	**European Project: ERASMO (EUSPA)**	Heudiasyc, CNRS

- ★ *Role: Responsible for integration, data acquisition, demonstrations, and validation. Participation in dissemination activities.*
- ★ High-integrity and high-precision localization system for autonomous navigation based on a multi-constellation GNSS PPP-RTK receiver, cameras, and lidars
- ★ Development of road feature detectors and a data association module using vector maps
- ★ Partners: GMV, Renault Group, Septentrio, Artisense, Nextium

Spring 2021	**National Project: Tornado (Ministry of Industry)** Preparation for the demonstration: vehicle and infrastructure integration, scenario planning	Heudiasyc, CNRS
Autumn 2019	**European Project: ESCAPE (GSA)** Development of tools for localization integrity evaluation and visualization for demonstration	Heudiasyc, CNRS
Autumn 2019	**Student Project: Teleoperation of Autonomous Vehicles** Mission execution with real-time obstacle detection, obstacle avoidance maneuvers proposed by the teleoperator	UTC

Publications

Juin 2023	**Map-aided annotation for pole base detection** Intelligent Vehicles Symposium, Anchorage, USA
Sept. 2023	**Pole-based Vehicle Localization with Vector Maps: A Camera-LiDAR Comparative Study** International Conf. on Intelligent Transportation Systems, Bilbao, Espagne
Oct. 2024	**Automatic Image Annotation for Mapped Features Detection** International Conf. on Intelligent Robots and Systems, Abu Dhabi, EAU