Maxime Noizet

Robotics engineer, Ph.D.

27 yo, driving license

Compiègne, France

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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

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 — Heudiasyc, CNRS
Robotic Perception and Localization
C++, Python, ROS, Git

July 2021 – Dec. 2024 — CNRS PhD Candidate in Robotics — Heudiasyc, CNRS, UTC
Multi-sensor perception with vector maps for autonomous vehicle localization
- ⋆ Integration of lidars and cameras with georeferenced elements from vector maps for localization
- ⋆ Multimodal automatic annotation for images and lidar data
- ⋆ Adaptation of object detection algorithms
- ⋆ Multi-sensor fusion for localization in complex environments

C++, Python, ROS, Git

Nov. 2020 – June 2021 — CNRS Research Engineer — Heudiasyc, CNRS
Localization integrity for autonomous vehicles, development of a 1D approximation module for data fusion
Python, C++, Cython, ROS, Git

Feb. - Oct. 2020 — Research Engineer Intern — Renault Group, UTC
Long-term trajectory prediction for detected vehicles in complex urban environments
C++, ROS, Python, Git

Sept. 2018 – Feb. 2019 — Assistant Engineer Intern — PiXYZ Software
Development of a visual programming feature for a CAD data optimization software
C++, Qt, Python, Git

Technical skills

General	Robotics, Intelligent vehicles, real-time software development, embedded systems, multi-sensor fusion, perception, machine learning, statistics, numerical analysis, automatics
Languages	C++, C, Python, LaTeX, R, Matlab, Assembly, UML, SQL
Technologies	ROS, Git, Qt, Cython, Docker, Jupyter, Tensorflow, Pytorch, Matlab Simulink

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) — Heudiasyc, CNRS
Preparation for the demonstration: vehicle and infrastructure integration, scenario planning

Autumn 2019 — European Project: ESCAPE (GSA) — Heudiasyc, CNRS
Development of tools for localization integrity evaluation and visualization for demonstration

Autumn 2019 — Student Project: Teleoperation of Autonomous Vehicles — UTC
Mission execution with real-time obstacle detection, obstacle avoidance maneuvers proposed by the teleoperator

Publications

June 2023 — Map-aided annotation for pole base detection — IV23, Anchorage, USA

September 2023 — Pole-based Vehicle Localization with Vector Maps: A Camera-LiDAR Comparative Study — ITSC23, Bilbao, Spain

October 2024 — Automatic Image Annotation for Mapped Features Detection — IROS24, Abu Dabi, UAE