

Clement Marie

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MSc student (MVA, ENS Paris-Saclay). Multimodal perception, 3D scene representation and learned state representations for robotics. Available for PhD entry from October 2026

Education

École Normale Supérieure Paris-Saclay (<i>ARWU World #13</i>)				<i>Sept 2025 – Oct 2026</i>	
Master M2 – Mathematics, Vision, Learning (MVA)		<i>Grade: 85.7/100</i>		<i>GPA 4.0</i>	
Interactions: Complexity, Stochasticity, Extrema & Rare Events		95/100		GPA 4.0	
Graphical Models: Discrete Inference and Learning		90/100		GPA 4.0	
Geometry Processing & Geometric Deep Learning		89.5/100		GPA 4.0	
Detection Theory		85/100		GPA 4.0 ...	
Université Paris-Saclay (<i>ARWU World #13</i>)				<i>2024 – 2025</i>	
Master M1 – Artificial Intelligence		<i>Grade: 75.1/100</i>		<i>GPA 3.7</i>	
Mathematics for Data Science		87.5/100		GPA 4.0	
Hands-on NLP		86/100		GPA 4.0	
Research Project		80/100		GPA 4.0	
Deep Learning		77/100		GPA 3.7 ...	
Sorbonne Université (<i>ARWU World #43</i>)				<i>2021 – 2024</i>	
BSc. Double Major in Mathematics and Computer Science		<i>Grade: 77.5/100</i>		Paris, France	
Lebesgue Integral on $\mathbb{R}^n$		98/100		GPA 4.0 top 1.4%	
Data Sciences		95.5/100		GPA 4.0 top 3%	
Algorithms I		83/100		GPA 4.0 top 7%	
Probabilities I		75.5/100		GPA 3.7 top 11% ...	

Research Experience

CEA List – Laboratory of Vision and Learning for Scene Analysis (LVA)		Saclay, France
Research Engineer Intern, supervised by PhD Researcher		Apr–Oct 2026 (ongoing)
- Designing multimodal architectures that fuse camera semantics with radar range/velocity into a persistent, geometry-grounded 3D latent state representation, decoupled from sensor modality and viewpoint, for scene understanding on mobile robotic platforms and autonomous vehicles. - Building training and benchmarking pipelines on real-world autonomous driving datasets (nuScenes; 3D detection, 3D semantic segmentation), and taking research methods through to working implementations.		
Huawei Research Center		Munich, Germany
Research Engineer Intern, supervised by PhD Researcher		May–Aug 2025
Global visual localization for autonomous driving: estimating viewpoint-invariant pose by matching onboard camera views against 2D maps. Extended Meta AI’s OrienterNet with Fourier encodings and Graph Neural Networks to ground perception in geometry rather than raw pixels; raised recall@1m position / yaw accuracy by +4% over SOTA OrienterNet. - Deployed reproducible Docker-based training and inference environments for running experiments across machines.		
Sorbonne Center of Artificial Intelligence (SCAI)		Paris, France
Research and Developer Intern		May–Jul 2024
Built a transformer-based tool for large-scale text comparison with efficient complexity; deployed an interactive web demo (Python, JavaScript).		

Awards

Huawei TechArena – 2nd Prize	Munich, Germany, 2025
HRTF Spatial Audio – \$3k award	
Trained multimodal models on joint image and HRTF spatial-audio data; presented before judges at the award ceremony.	

Skills & Knowledge

Methods & Algorithms	Coding / Software / Hardware
Perception & Fusion query-based camera–radar fusion (DETR-family, cross-attention, radar-guided queries)	Core Python (fluent), C++ (proficient), PyTorch (advanced), MMCV
Scene Representation BEV features, image-to-BEV transformation, radar point clouds	ML Stack NumPy, SciPy, pandas, scikit-learn (proficient)
Localization image-to-map localization, neural BEV matching	Infrastructure Docker, Linux, Git, GPU cluster training (proficient)
Simulation Isaac Gym, MuJoCo, CARLA	Languages French (native), English (fluent), German (basics, A2)
Foundations transformers & attention, probabilistic inference, stochastic processes, generative models	