Leandro Di Bella

SOFTWARE ENGINEER – (3D) COMPUTER VISION ENGINEER – MACHINE LEARNING ENGINEER

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leandro-svg | leandro-di-bella | Scholar | ORCID | mappx.app

"Deployable autonomous perception with temporal consistency and robustness under distribution shift."

Summary

PhD candidate looking for a full-time opportunity. Specialized in computer vision and AI for autonomous driving and autonomous navigation for drones, with expertise in detection, multi-object tracking, and vision-language models (VLMs). Currently working on multi-agent motion forecasting using flow-based generative AI for autonomous perception and modular sensor fusion for autonomous drones. Seeking to contribute to Europe's research and innovation ecosystem by advancing AI solutions for intelligent systems.

Experience

VoxelSensors (research project)
COMPUTER VISION RESEARCHER
Jan. 2026 – Present
Brussels, Belgium
Sensor fusion and localization for autonomous drone systems.

MACQ Mobility (research project)
COMPUTER VISION RESEARCHER
Jan. 2023 – Jan. 2026
Brussels, Belgium
Detection, 3D multi-object tracking, scene understanding, and motion forecasting for autonomous vehicles using generative AI.

Mappx
FOUNDER
Aug. 2025 – Present
Brussels, Belgium
Built a map-centric social travel app (Flutter) with FastAPI backend and PostgreSQL.

MACQ Mobility
COMPUTER VISION INTERN
Aug. 2022 – Oct. 2022
Brussels, Belgium
Developed and integrated instance segmentation on NVIDIA Jetson TX2 (Python/C++).

Vrije Universiteit Brussel
TEACHING ASSISTANT
~2022 – 2025
Brussels, Belgium
Teaching assistant for Machine Learning and Big Data Processing (2.5 years).

Education

ETRO, Vrije Universiteit Brussel (VUB)
PhD in Engineering Sciences (AI & Computer Vision)
Brussels, Belgium
2023 – Present

Solvay Brussels School
Advanced Master in Industrial & Technological Management
Brussels, Belgium
2025 – 2027 (ongoing)

Bruface (ULB/VUB)
M.Sc. Electrical Engineering (Information Technology Systems)
Brussels, Belgium
2020 – 2023

Selected publications

HybridTrack: A Hybrid Approach for Robust Multi-Object Tracking
L. Di Bella, Y. Lyu, B. Cornelis, A. Munteanu
IEEE RA-L / ICRA (2025)

DeepKalPose: An enhanced deep-learning Kalman filter for temporally consistent pose estimation
L. Di Bella, Y. Lyu, A. Munteanu
Electronics Letters (2024)

ReferGPT: Towards Zero-Shot Referring Multi-Object Tracking
T. Chamiti, L. Di Bella, A. Munteanu, N. Deligiannis
CVPR Workshops (2025)

LAM3D: Leveraging Attention for Monocular 3D Object Detection
D.-A. Sas, L. Di Bella, Y. Lyu, F. Oniga, A. Munteanu
IEEE MMSP (2024)

Skills

Programming	Python, C++, CUDA, PyTorch, TensorRT, ONNX, FastAPI, Flutter/Dart
ML / Perception	Detection, instance segmentation, monocular 3D, 2D/3D tracking (MOT), Kalman filtering, temporal consistency
Vision-language & GenAI	Grounding / referring tracking, multimodal reasoning, generative motion forecasting
Systems / Deployment	Jetson, Docker, GitHub CI/CD, Azure cloud services, Firebase, PostgreSQL
Product	Mapbox, backend ops, shipping & iteration
Academic service	Reviewer: TIP, RA-L, ICRA, ICIP, IET