



Leandro Di Bella

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

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🎓 Scholar



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“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 Belgium's research and innovation ecosystem by advancing AI solutions for intelligent systems.

Experience

VoxelSensors (research project) COMPUTER VISION RESEARCHER	Jan. 2026 – Present <i>Brussels, Belgium</i>	Sensor fusion and localization for autonomous drone systems.
MACQ Mobility (research project) COMPUTER VISION RESEARCHER	Jan. 2023 – Jan. 2026 <i>Brussels, Belgium</i>	Detection, 3D multi-object tracking, scene understanding, and motion forecasting for autonomous vehicles using generative AI.
Mappx FOUNDER	Aug. 2025 – Present <i>Brussels, Belgium</i>	Built a map-centric social travel app (Flutter) with FastAPI backend and PostgreSQL.
MACQ Mobility COMPUTER VISION INTERN	Aug. 2022 – Oct. 2022 <i>Brussels, Belgium</i>	Developed and integrated instance segmentation on NVIDIA Jetson TX2 (Python/C++).
Vrije Universiteit Brussel (VUB) TEACHING ASSISTANT	~2022 – 2025 <i>Brussels, Belgium</i>	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)	<i>Brussels, Belgium</i> 2023 – Present
Solvay Brussels School Advanced Master in Industrial & Technological Management	<i>Brussels, Belgium</i> 2025 – 2027 (ongoing)
Bruface (ULB/VUB) M.Sc. Electrical Engineering (Information Technology Systems)	<i>Brussels, Belgium</i> 2020 – 2023
Bruface (ULB/VUB) B.Eng.	<i>Brussels, Belgium</i> 2017 – 2020

Selected publications

Selected journal articles

Selected conference proceedings

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 monocular vehicle 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 ML / Perception

Python, C++, CUDA, PyTorch, TensorRT, ONNX, FastAPI, Flutter/Dart
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

Last updated: 2026-02-02