

Lorenzo Mur-Labadiá

[Personal Web](#)lmur@unizar.es[Scholar](#)

I completed my PhD in Deep Learning and Computer Vision at the University of Zaragoza, where I developed visual models for segmentation, detection, forecasting, and video understanding, resulting in six first-author publications at top-tier computer vision venues (*ICRA 2023, ICCV 2023, IROS 2023, ECCV 2024, CVPR 2025, ICCV 2025*).

I subsequently joined Meta AI (FAIR) as a Research Scientist, working with Adrien Bardes and Yann LeCun on the next generation of V-JEPA, the state-of-the-art architecture for video understanding.

Professional Experience



Research Scientist — Fundamental Artificial Intelligence Research (FAIR),
Meta (Paris) *Supervisors: Adrien Bardes, Yann LeCun | June 2025 – December 2025*

- Led the redesign of the **V-JEPA architecture** for large-scale video representation learning
- Trained foundation models **from scratch** at billion-parameter scale (ViT-g 1B, ViT-G 2B) using distributed systems.
- Developed **model compression and distillation pipelines** to deploy compact variants (ViT-S, ViT-L)
- Achieved **state-of-the-art results** across multiple video understanding and prediction benchmarks



Research Scientist at the University of Catania (2023). Supervised by G.M.Farinella and A.Furnari. *Next-active object anticipation.*



Universidad Zaragoza

PhD Candidate in Computer Vision and Robotics (2022-2025) - Supervised by Ruben Martinez Cantin and J.Jesus Guerrero. University of Zaragoza.



Research Assistant (2021-2022) - Robot Learning Lab, University of Freiburg

Panoptic Scene Completion from LiDAR Point Clouds



Research Assistant (2021) - RoPeRT, Robotics, Perception and Real Time Group

Affordances detection in computer vision using Deep Learning

Publications

Lorenzo Mur-Labadia*, Mike Rabbat, Nicolas Ballas, Yann Lecun, Adrien Bardes. V-JEPA 2.5: Unlocking Dense Features in Video Self-Supervised Learning. *Coming Soon in early 2026*.

L.Mur-Labadia*, M.Santos Villafranca*, A. Perez Yus, J.Bermúdez, R.Martinez-Cantin and J.J Guerrero. O-MaMa: Learning Object Mask Matching between Egocentric and Exocentric Views. *In Proc. of the IEEE/CVF International Conference on Computer Vision **ICCV 2025 (Top Conference)***.

L.Mur-Labadia*, M.Santos Villafranca*, A. Perez Yus, J.Bermúdez, R.Martinez-Cantin and J.J Guerrero. Learning Object Mask Matching between Egocentric and Exocentric Views. **EgoVIS@CVPR2025 First place at the EgoExo4D Correspondences Challenge**

L.Mur-Labadia, R.Martinez-Cantin and J.J Guerrero. DIV-FF: Dynamic Image Video Feature Fields for egocentric vision. *In Proc. of the IEEE/CVF Computer Vision Pattern Recognition Conference, **CVPR 2025 HIGHLIGHT (Top Conference)***.

C.Plou*, L.Mur-Labadia*, R.Martinez-Cantin and A. Murillo. Ego4D Step Grounding Challenge: Bayesian temporal-order priors for test time refinement. **EgoVIS@CVPR24 workshop. First place at the Ego4D Step Grounding Challenge**

L.Mur-Labadia, A.Furnari, G.M.Farinella, R. Martinez-Cantin and J.J Guerrero. Leveraging Affordances and Attention models for STA EgoVIS@CVPR24 workshop. **Second place at the Ego4D Short Term Object Interaction Anticipation**

L.Mur-Labadia, A.Furnari, G.M.Farinella, R. Martinez-Cantin and J.J Guerrero. AFF-ttention! Affordances and Attention models for Short-Term Object Interaction Anticipation *In Proc. of the IEEE/CVF European Conference on Computer Vision, **ECCV 2024 (Top Conference)***.

L.Mur-Labadia, R.Martinez-Cantin and J.J Guerrero. Uncertainty Estimation in Instance Segmentation of Affordances via Bayesian Visual Transformers *Under review at the IEEE Transactions on Cybernetics*.

L.Mur-Labadia, R.Martinez-Cantin and J.J Guerrero. Multi-label affordance mapping from egocentric vision *In Proc. of the IEEE/CVF International Conference on Computer Vision **ICCV 2023 (Top Conference)***.

L.Mur-Labadia, R.Martinez-Cantin and J.J Guerrero. Bayesian deep learning for affordance segmentation in images *In Proc. of the IEEE International Conference on Robotics and Automation* **ICRA 2023 (Top Conference)**.

D.Morilla*, L.Mur-Labadia*, E.Montijano and R.Martinez-Cantin. Robust Fusion for Bayesian Semantic Mapping. *In Proc. of the IEEE/RSJ International Conference on Intelligent Robots and Systems* **IROS 2023 (Top Conference)**.

Panoptic Scene Completion from LiDAR Point Clouds in outdoors environments (2022) - L. Mur-Labadia, N.Gosala, P.Drews and A.Valada. *Master Thesis Project at the University of Freiburg, Master of Embedded Systems. Submitted to IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2022*

Bayesian prediction of affordances from images (2021) - L.Mur-Labadia and R.Martinez Cantin. *In IROS 2021 Workshop on Egocentric vision for interactive perception, learning, and control*

Awards

Winner at the EgoVIS@CVPR25 Workshop in the EgoExo4D Correspondences

Winner at the EgoVIS@CVPR24 Workshop in two different categories - Step Grounding and Short Term Object Interaction Anticipation

DGA. PhD Scholarship (2022-2026) - Competitive scholarship to pursue a Ph.D. Autonomic Government of Aragon

Excellence Scholarship (2016-2022) - Best grades maintained for the whole Bachelor degree, with an average of 8.41/10. Top 1 over 160.

Regional Competition of Physics - Third place (2016) - Autonomic Government of Aragon

Education

PhD in Computer Vision and Robotics (2022-2026). University of Zaragoza

MSc Robotics, Graphics and Computer Vision (90 ECTS) 2020-2021 University of Zaragoza

BSc Industrial Technologies Engineering. 8.41/10. Top 1 over 160. (240 ECTS) 2016-2020 University of Zaragoza.

BSc Philosophy 2020-2022 UNED

Visitor Student (BSc Mechanical Engineering) - University of Bath (UK) 2016-2017

IB (International Baccalaureate) (42 over 45 points) and Spanish Baccalaureate (9.82 over 10 points) 2014-2016

Professional Music Studies at the Conservatory of Huesca - Viola Speciality 2010-2016

Teaching

Machine Learning (2024-2025) University of Zaragoza - *MSc Robotics, Graphics and Computer Vision*

Master Thesis Supervision (2022-2023) Alejandro de Nova. Language Feature Fields from Egocentric Video

Automatic Systems (2023-2024) University of Zaragoza-*BSc Mechanical Engineering*

Master Thesis Supervision (2022-2023) Miguel Marcos. Music generation with Bayesian optimization

Computer Vision and Robotics (2022-2023). University of Zaragoza-*MSc Industrial Engineering*

Intelligent Systems (2021-2022). University of Zaragoza-*MSc Computer Science*

Industrial Robotics and Automation (2021-2022). University of Zaragoza-*BSc Industrial Technologies Engineering*

Other skills

English Cambridge Advanced C1 (184 points).

French B1

Volunteer in a youth organization participating as educator in summer camps and the preparation of several musicals (Mamma Mia, les Miserables, the Lion King)