Tomás Berriel Martins

tberriel.github.io

PhD Candidate in Computer Vision
Robotics, Computer Vision & Artificial Intelligence Group
University of Zaragoza, Spain ✉ *tberriel@unizar.es*

Interests and Objectives

My main area of interest lies on Deep Learning, Computer Vision, and 3D Geometry. I am particularly interested on the potential of implicit scene representations to complement traditional explicit representations and SLAM algorithms.

Publications

- ***[c3]*** **OVO-SLAM: Open-Vocabulary Online Simultaneous Localization and Mapping.** Tomás Berriel Martins, Martin R. Oswald, Javier Civera. Under review (Arxiv 2024)
- ***[c2]*** **Feature Splatting for Better Novel View Synthesis with Low Overlap.** Tomás Berriel Martins, Javier Civera. Proceedings of the British Machine Vision Conference (BMVC 2024)
- ***[w1-c1]*** **Ray-Patch: An Efficient Querying for Light Field Transformers.** Tomás Berriel Martins, Javier Civera. Proceedings of the IEEE/CVF International Conference on Computer Vision Workshops & International Conference on 3D Vision (ICCV 2023 & 3DV 2024)

Work/Research Experience

2022–Today **Robotics, Computer Vision and Artificial Intelligence group (RoPeRT)**.
Predoctoral Researcher, funded by Gobierno de Aragón.
Research topics: Computer vision; 3D Geometry; Neural Representations would prefer to have time.
Advisor: Javier Civera
Zaragoza, Spain

2024 (4 months) **The Computer Vision Group, University of Amsterdam**.
Visiting Researcher
Worked on building online open-vocabulary semantic 3D representations.
Supervisor: Assistant Professor Martin R. Oswald
Amsterdam, Netherlands

2020–2021 (1 year) **Robotics, Perception & Real Time Group, University of Zaragoza**.
Research Engineer
Worked on Bayesian Neural Networks for uncertainty prediction in 360º images' layout estimation.
Advisor: Professor Javier Civera
Zaragoza, Spain

2019–2020 (1 year) **ITAinnova**.
Robotics Research & Development Engineer Intern
Worked on a multidisciplinary team that developed autonomous platforms for both indoor and outdoor environments.
Supervisor: Javier Huarte
Zaragoza, Spain

Educational Background

2021–Today **Doctoral Program in Systems Engineering and Computer Science**.
University of Zaragoza
Research topics: Computer vision; 3D Geometry. Represenation learning.
Advisor: Javier Civera

2020–2022 **Master in Robotics, Graphics, and Computer Vision**.
University of Zaragoza
Master's thesis: *Learning disentangled representations of scenes from images.*
Advisor: Javier Civera

2020 **Artificial Intelligence Fundamentals**.
ColumbiaX, edX

2015–2019 **Bachelor's Degree in Electronic and Automatic Engineering**.
University of Zaragoza
Bachelor's thesis: *Automated human actions recognition in 3D video sequences.*
Advisor: Professor Carlos Orrite

Administrative roles

2023–Today **Substitute of the Student's representative in the Doctoral School Steering Committee**.
University of Zaragoza

2021–Today **Student's representative in the Quality Committee of the Doctoral Program in the Systems Engineering and Computer Science**.
School of Engineering and Architecture

2020–2021 **Student's representative in the Masters' Quality Assurance Committee**.
School of Engineering and Architecture

Languages

English Fluent
Italian Fluent
Spanish Native