

Nicolò Iacobone

Computer Vision & 3D Deep Learning Researcher

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ABOUT ME

I am a computer vision researcher working across feed-forward 3D reconstruction and semantic scene understanding. I am looking for research or ML engineering roles in industry, or a PhD in 3D perception and representation learning. Outside engineering, I build things with Arduino, I juggle, fish and solve Rubik's cubes, and every season I reach Grand Champion in Clash Royale, which puts me among the top 2–4% of active players worldwide.

EDUCATION

MSc in Computer Engineering — Artificial Intelligence and Data Analytics Oct 2022 – Mar 2026
Politecnico di Torino, Italy · 108/110 · Thesis carried out at ETH Zürich (Jul 2025 – Mar 2026)

BSc in Computer Science and Automation Engineering Oct 2019 – Oct 2022
Politecnico di Bari, Italy · Erasmus exchange at Universitatea Tehnică din Cluj-Napoca, Romania (Oct 2021 – Jul 2022)

RESEARCH EXPERIENCE

Research Collaborator — ETH Zürich, Photogrammetry & Remote Sensing (D-BAUG) Mar 2026 – Sep 2026
3D-Consistent Instance Segmentation on Frozen Feed-Forward Backbones · [Code](#)

- Taught a frozen 3D reconstruction model (VGGT) to also pick out the individual objects in a scene, keeping each object consistent across every view, while training only on ordinary 2D annotations.
- Built the whole pipeline myself, from data loading to evaluation on the official ScanNet benchmark, where it beats the two published methods it compares against and trains far faster.

Master's Thesis — ETH Zürich Jul 2025 – Mar 2026
Towards Multi-View 3D Instance Segmentation via Semantic Distillation · [Code](#) · [SAM 2 teacher fork](#)

- Taught a 3D reconstruction model (MapAnything) to also understand what it sees, by having it imitate the features of a segmentation model (SAM 2) while staying consistent across views.
- Found that a geometry-focused model runs out of capacity for fine-grained semantics, which led to the follow-up work above.

PROJECTS

Independent work on open-source models Jul 2025 – Mar 2026

- **Automatic 2D instance annotation of ScanNet with SAM 3** ([code](#)): a pipeline that labels every object in each ScanNet scene on its own, tracking objects across frames and picking them up again when they are lost.
- **Controlled synthetic 3D data and point tracking** ([Kubric](#), [SpaTrackerV2](#)): generated synthetic scenes with controlled camera motion and ground-truth object masks, from static to cluttered and occlusion-heavy, and tracked 3D points through them.

Academic projects

- **Real-Time Anomaly Detection for Road Scenes:** real-time inference on embedded devices [Report](#) · Jun 2024
- **Synthetic Data Generation for AROL Closure Systems:** CVAE for industrial sensor time series [Code & slides](#) · Mar 2024
- **HoloLens 2 Mixed-Reality App:** Unity/MRTK holograms that follow the user's head and hands [Code](#) · Jun 2022

SKILLS

3D Computer Vision: multi-view 3D reconstruction · 2D/3D instance segmentation · point tracking · VGGT, MapAnything

Deep Learning: DETR / MaskDINO-family models · distillation from SAM 2/3 · synthetic data generation (Kubric, CVAE)

Programming: Python (advanced), C/C++, PyTorch, HPC / SLURM **Languages:** Italian (native) · English (proficient)