





Sebastian Cavada

Computer Vision student & Digital Innovator

-  <https://sebo-the-tramp.github.io>
-  sebastian.cavada@mbzuai.ac.ae




About Me

Computer Vision Researcher and Digital Innovator with proven expertise in 3D reconstruction, real-time pose tracking, and neural network optimization for low-resource systems. Demonstrated track record of winning hackathons and leading technical projects, combining theoretical knowledge with practical implementation. Multilingual professional with experience in international collaborations and a passion for applying advanced computer vision solutions to environmental challenges.

Social Network

-  LinkedIn Profile
-  Github Profile Page
-  Website

Languages

-  Italian - C2 - mother tongue
-  English - C1 - IELTS score band 8
-  German - B2 - University exam

Education

Bachelor in Computer Science

- 2023 – 2025 **Master in Computer Vision** MBZUAI - Abu Dhabi
Master of Research in Computer Vision, Mohamed bin Zayed University of Artificial Intelligence (MBZUAI), Abu Dhabi, UAE, Graduated 2025, Focused on large-scale 3D reconstruction, 3D foundation models, and Gaussian Splatting supervised by Prof. Ian Reid.
- 2019 – 2023 **Bachelor Computer Science** Free University Bolzano
Graduated with **108/110** in Computer Science from a trilingual university, proficient in English, German, and Italian. Thesis project supervised by Prof. Oswald Lanz.
- 2022 **Erasmus - Cognitive Science** Universität Osnabrück
Studied Cognitive Science for 6 months at the University of Osnabrück, in Germany, focusing on **Machine Learning and Computer Vision**. Strengthen my German language and communication skills.
- 2016 – 2019 **Maturità Italiana** ITT Marconi, Rovereto
Graduated with **97/100** in the technical school in Rovereto with a specialization in Computer studies
- 2017 – 2018 **Irish Leaving Certificate** CBS Mitchelstown, Mitchelstown
4th year abroad, learned English, and achieved the Irish Leaving Certificate graduating with **476/625**

Publications

- 2024 **Does Complexity Pay Off? Applying Advanced Algorithms to Depression Detection on the GLOBEM Dataset**
Sebastian Cavada, Alvaro Berobide, Yevheniia Kryklyvets
IARIA - HEALTHINFO 2024
- 2025 **CAD-Assistant: Tool-Augmented VLLMs as Generic CAD Task Solvers**
Dimitrios Mallis, Ahmet Serdar Karadeniz, Sebastian Cavada, Danila Rukhovich, Niki Foteinopoulou, Kseniya Cherenkova, Anis Kacem, Djamila Aouada
ICCV 2025

Awards

- March 2024 **Winner of the Pioneers4.0 Hackathon**, co-organized by the Ministry of Industry and Advanced Technology (MoIAT), EDGE Group, and LIPTON. Awarded a special internship at LIPTON. EDGE - UAE
- July 2023 **Winner of fully founded master of research scholarship** MBZUAI - UAE
- Sep. 2022 **Winner of Challenge "4D buildings" by Siemens** HackZurich

Projects

- 2019 – now **Hackathons** Around the world
Participated in numerous hackathons across Europe, demonstrating strong collaborative and technical skills. Achieved a notable 50% win rate in competitions. In 2022 I led a team to win first prize in the "4D Buildings" challenge at HackZurich, Europe's largest hackathon.
- 2021 – 2023 **Climathon Fiemme** Predazzo
Co-organized the inaugural Climathon in Fiemme Valley, collaborating with three other individuals passionate about climate action. Successfully attracted over 50 participants, resulting in 9 innovative ideas and business projects with significant local community impact over the years.

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Interests

AWS

Flutter

Computer Vision

Virtual Reality

MySQL

SLAM

VueJS

Open Source

Soft Skills

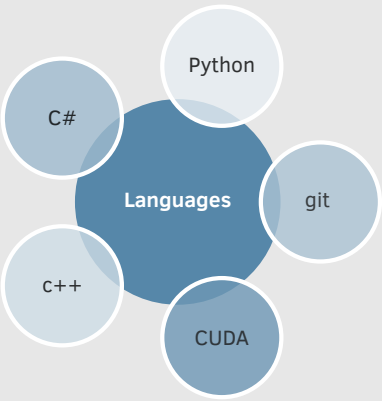
Creative

Technologist

Teamwork

Problem Solving

PLs



Interests

Sport

Music

Photography and Video Editing

Reading

Research Experience

Fall 2025	Collaborator – INRIA Paris Researching how vision–language models interpret physical dynamics in synthetic environments; project in preparation for ICML. Supervised by Raoul de Charette.	Gaussian Splatting
Summer 2025	Visiting Researcher – MBZUAI Fine-tuned 3D foundation models to incorporate camera parameter priors, improving pose-aware depth estimation. Supervised by Prof. Ian Reid.	3D Foundation Models
Summer 2024	CVI2 – University of Luxembourg Built dataset creation pipelines to instruction-tune open-source LLMs for 2D/3D mesh autocompletion. Utilized PyTorch, Torchrun, HPC, and WandB for visualization; accelerated training to complete within 2 days. Supervised by Dr. Anis Kacem.	Mesh Reconstruction with LLMs
Summer 2023	FBK - Trento Designed a computer vision pipeline to scale neural networks for low-resource devices, from GPU prototyping in Python to MCU deployment in C. Released code as open-source. Supervised by Francesco Paissan.	Efficient Neural Networks for Embedded Systems
2022–2023	Thesis Internship – UniBZ Developed a real-time 3D human pose tracking system integrating egocentric and exocentric video streams, forming the basis of my thesis. Created a digital twin of the indoor environment for enhanced visualization. Supervised by Prof. Oswald Lanz.	Egocentric/Exocentric 3D Pose Tracking
Summer 2017	Junior Web Developer – Suggesto Implemented a mesh network system, created content, tested infrastructure, and improved existing codebase.	Mesh Network Project

Working Experience

2021 – 2022	VR Developer CTO and VR programmer at RealverseVR: Led development of educational experiences through VR technologies such as unity and meta quest, resulted in the publishing of a Virtual experience on Quest store and SteamVR, in collaboration with the museum of the Lagazuoi, Cortina.	RealverseVR - a Start Up project
2021 – 2023	Student Tutor Appointed for individual study support based on previous experience, personal characteristics, and expressed availability	University of Bolzano

Extra-Curricular Activities

2022 - now	Content creator on YouTube , sharing tips and my experiences while traveling and programming
2023	MBZUAI Entrepreneurship Courses , hosted by StartAD to accelerate ideas development
2023	Practice-oriented course on the EU’s history , structure, and politics at the University of Innsbruck EUREGIO Brussels School, including a visit to the European Parliament in Brussels.
2021	Entrepreneurship and Innovation Master course as a free choice at the Free University of Bolzano
2020 - 2022	Student representative of the computer science faculty at the Free University of Bolzano.