Cai Selvas Sala

caiselvassala@gmail.com | *linedin.com/in/caiselvas* | *github.com/caiselvas* | *huggingface.co/caiselvas*

EDUCATION

Technical University of Munich (TUM) | Exchange Program   **Oct. 2025 – Mar. 2026**

Erasmus+ Program (24 ECTS)
- Advanced graduate-level coursework in Computer Vision (3D/4D, Detection, Segmentation, Tracking), Deep Learning, and Machine Learning for Business Analytics.

Universitat Politècnica de Catalunya (UPC) | BSc   **Sep. 2022 – Present**

Bachelor of Science in Artificial Intelligence (240 ECTS)   GPA: 8.83/10
- Honors: *Unsupervised and Reinforcement Learning, Programming and Algorithms I*
- Mentor for first-year students.

PUBLICATIONS

CVPR 2026 (Main Conference) | 1st Author (Accepted, To appear)   **2026**

Cai Selvas-Sala, Lei Kang, and Lluis Gomez (2026). "SALMUBench: A Benchmark for Sensitive Association-Level Multimodal Unlearning". In: *Proceedings of The IEEE/CVF Conference on Computer Vision and Pattern Recognition.*

EXPERIENCE & RESEARCH

Computer Vision Center (CVC) | Research Intern (Bachelor's Thesis)   **Feb. 2026 – Present**
- Awarded the highly competitive Elena Maseras Fellowship (13.8% acceptance rate).
- Developing my Bachelor's Thesis within the Learning and Machine Perception (LAMP) group.
- Bachelor Thesis: *Low-Rank Continual Learning for Foundation Models.*
- Supervisors: Dr. Joost van de Weijer, Dr. Bartłomiej Twardowski, Prof. Ramón Sangüesa (UPC).

Computer Vision Center (CVC) | Research Intern   **Apr. 2025 – Aug. 2025**
- Awarded the competitive Rosa Sensat Fellowship; supervised by Dr. Lluis Gomez.
- First-authored a research paper (accepted in Proceedings of CVPR 2026) on a novel benchmark for Machine Unlearning in CLIP, training large-scale ViT models from scratch on 400M pairs and engineering a 60k-pair synthetic dataset with identity-preserving diffusion models to test sensitive data removal.

PROJECTS

NanoMoE: From-Scratch Sparse Mixture-of-Experts | Personal Project   **Dec. 2025 – Present**
- Designing and implementing a Sparse Mixture-of-Experts (MoE) Transformer in PyTorch, featuring vectorized Noisy Top-K Gating and a custom BPE tokenizer for training on 500M FineWeb-Edu tokens.
- Developing auxiliary load-balancing losses to prevent expert collapse, with the goal of evaluating scaling laws and convergence efficiency against parameter-equivalent dense baselines.

LaIA: Administrative Assistant | Hackathon Project   **Nov. 2024**
- Winner project of Aina Hack 2024, organized by Barcelona Supercomputing Center (BSC).
- AI assistant for public administration that accepts files and images as inputs, supports internet searches, and generates informative text and video outputs to guide users through administrative processes.

Other Projects & Hackathons
- Participated in 10+ national and international hackathons applying AI to real-world challenges, including HackaTUM, LauzHack, HackUPC, HackBCN AI, DatathonFME, and more.
- Additional personal and collaborative AI-related projects can be found in my GitHub & Hugging Face.

SKILLS

Programming Languages: Python, R, SQL, C/C++, MATLAB, PDDL.

Libraries & Frameworks: PyTorch, TensorFlow, NumPy, Scikit-learn, OpenCV, Spark, Git, Docker, ...

Expertise: Machine Learning, Deep Learning, Computer Vision, Reinforcement Learning, NLP, AI Algorithms, Data Science & Analysis, Databases, Robotics, Mathematics, Statistics.

Languages: English (C2 CEFR Level, 2025), Spanish (Native), Catalan (Native), German (Elementary).