Jaume Mora i Ladària

Artificial Intelligence BSc Student

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○ JaumeMiL • **in** JaumeMiL

Summary

I am currently an Artificial Intelligence Engineering student at the Universitat Politècnica de Catalunya (UPC), with a strong background in computer vision and practical experience as an intern at the same institution. My studies and practical experience reflect my interest in technological innovation and the application of advanced artificial intelligence techniques. I aspire to continue developing my skills in the field of computer vision and strengthening my programming abilities to contribute to educational and technological progress.

Research Interests

Computer Vison, Real-time ML systems, Distributed AI systems, Edge deployment & optimization.

Education

Universitat Politècnica de Catalunya (UPC)   **Barcelona**

BSc in Artificial Intelligence   *2022 – 2026*

Expected graduation: September 2026.

Relevant coursework: Machine Learning, Deep Learning, Computer Vision, Robotics, Optimization, Data Analysis (SQL/Python), Natural Language Processing.

Bachelor's Thesis

Universitat Politècnica de Catalunya (UPC)   **Barcelona**

*A Novel Computer Vision Framework to Enhance Robot Skills, **Grade: 9.5/10***   *2026*

- Developed a **distributed real-time system** using **ROS 2** and **Python**, focusing on low-latency data transmission and model inference.
- Engineered a robust perception pipeline using **MediaPipe** and a custom **EurekaNet** CNN architecture, achieving **93.83% accuracy** for gesture classification.
- Implemented **safety-critical watchdog mechanisms** and temporal filtering to ensure system reliability under network uncertainty.
- Streamlined deployment via **Docker**, ensuring full environment reproducibility.

Experience

Universitat Politècnica de Catalunya (UPC)   **Barcelona**

Learning Grant Student — Computer Vision   *09/2025 – 06/2026*

- Migrated legacy CV and image processing labs from **MATLAB to Python**, improving execution speed and maintainability.
- Built production-ready pipelines using **NumPy, OpenCV, Matplotlib** for large-scale academic deployment.
- Ensured code quality and reproducibility via version control and technical documentation.

Canet Rock Festival   **Canet de Mar**

Bar Manager / Operational Lead   *06/2022 – 07/2025*

- Managed logistics and inventory for large-scale events (25k+ attendees) under high pressure.
- Led cross-functional teams, optimizing workflows and real-time decision-making.

Selected Engineering Projects

Bicing Logistics: Optimized urban mobility rebalancing using **Hill Climbing** and **Simulated Annealing**, improving system efficiency and station availability.

Genetic Traits ML: Built an end-to-end supervised ML pipeline for trait prediction from structured genomic datasets using **scikit-learn**.

Weather Forecasting: Designed a predictive system for rainfall using Neural Networks and Logistic Regression, focusing on feature engineering and model evaluation.

NLP Task Extractor: Developed an NLP pipeline for task extraction and schedule automation using Transformer-based models.

Medical Decision Support: Created a cirrhosis prediction model emphasizing **feature importance** and interpretability.

Technical Skills

Programming: **Python** (Advanced), **C++** (Intermediate), **SQL** (PostgreSQL/BigQuery), MATLAB

ML & CV: **PyTorch, TensorFlow**, scikit-learn, OpenCV, MediaPipe, CNNs, Transformers

Tools & Systems: **Docker**, Git, MacOS, **Linux (Ubuntu)**, ROS 2, Data pipelines, Rocker

Soft Skills: Complex problem-solving, Team leadership, Technical communication

Languages

Catalan: Native

Spanish: Native

English: Advanced

German: Basic

Awards & Achievements

2024: **Second Place** — Datathon 2024 (UPC/FME). Data challenge winner.

Literature: 4-time Na Batlessa Catalan Literature Prize.

Strategy: Competitive Chess background (Best Player U-12 Mallorca).

Extra-curricular

Volleyball: UPC Varsity Volleyball Team member.

Music: Long-term Violin training (10+ years), fostering discipline and focus.

Links

LinkedIn: linkedin.com/in/JaumeMiL

GitHub: github.com/JaumeMiL

Website: jaumemil.cat