Josep Audenis Ros

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Barcelona, Catalonia, Spain

Objective

Aspiring to leverage my background in computer science and research to solve real-world problems through data-driven insights and advanced machine learning techniques. I am eager to contribute to impactful projects in data science, deep learning, and AI while continuously learning and collaborating in multidisciplinary teams.

Experience

- **La Salle URL [🌐]** *September 2024 - Present*
  Quantum Computing Research Intern Barcelona, Spain
  - Collaborated hand in hand with a PhD candidate in Quantum Computing and Quantum Machine Learning.
  - Implemented and documented over 5 quantum algorithms for academic and research purposes.
  - Developed unit tests for a quantum transpiler using JUnit, increasing workflow efficiency by 30%.
  - Wrote comprehensive documentation for the quantum transpiler, facilitating collaboration.

Education

- **La Salle URL** *September 2022 - June 2026*
  Computer Engineering Barcelona, Spain
  - Software engineering group researcher.

- **Jesuïtes Casp** *September 2008 - June 2020*
  Elementary & High School education Barcelona, Spain
  - Activities & societies: Robotics club

Projects

- **EuroSAT: Extracting More from Less** *June 2025 - July 2025*
  Tools: Python, scikit-learn, pandas, matplotlib [🐙]
  - Designed a feature extraction pipeline using three spectral bands (RGB) for Sentinel-2 satellite image classification.
  - Applied and benchmarked classical ML algorithms, analyzing how feature engineering narrows the gap to state-of-the-art performance.

- **Neuroevolutions** *July 2025*
  Tools: Python, gymnasium, numpy, matplotlib [🐙][🐙][🐙]
  - Developed and evolved neural network controllers using genetic algorithms to solve continuous control tasks in OpenAI Gym environments (CartPole, LunarLander, BipedalWalker).
  - Designed and optimized genome encoding and mutation strategies for efficient exploration of policy parameter spaces, achieving convergence within 10s of generations.

Skills

- **Programming Languages:** C, Python, Java, PHP, Shell, Assembly, Dart.
- **Database Systems:** MySQL, SQLite.
- **Data Science & Machine Learning:** Pandas, NumPy, Scikit-learn, Matplotlib, Seaborn, TensorFlow.
- **DevOps & Version Control:** Git, Dockers.
- **Mathematical & Statistical Tools:** Matlab, Latex, SciPy, Excel, Apache Math.
- **Other Tools & Technologies:** Quantum Computing, Qiskit.
- **Research Skills:** Literature Review, Technical Writing, Algorithm Analysis, Scientific Presentations.

Additional Information

Languages: Catalan (Native), Spanish (Native), English (B2), French (A1)