**Miguel Camacho**

*Machine Learning & Research Engineer*

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# About Me

I am a machine learning researcher with a strong interest in applying AI to scientific and engineering challenges.  
  
At the CVBLab at Universitat Politècnica de València, I work on both academic and industry-oriented research, contributing to European projects. My experience covers areas like Deep Learning, reinforcement learning, computer vision and physics-informed models.  
  
I also develop practical tools and open-source projects, from medical image segmentation to control models. Having built a solid research background, I am now eager to apply these skills to real-world problems and innovative applications.  
  
Core technical expertise: Python, Deep Learning, Reinforcement Learning, Computer Vision, and Quantum ML.

# Experience

**CVBLab – Universitat Politècnica de València***AI Researcher | Sep 2023 – Present*- Technical management of EU-funded projects METAMORPHA and TURBO.  
- Coordination with research teams and industry partners.  
- Applied reinforcement learning and computer vision in multidisciplinary contexts.  
- Development of AI solutions in real-world international frameworks.

**CVBLab – Universitat Politècnica de València***Research Intern | Feb 2022 – Jul 2023*- Conducted research in Quantum Machine Learning with PennyLane.  
- Developed reinforcement learning models applied to complex problem-solving.  
- Designed and implemented deep learning models for signal and image analysis.  
- Gained experience in Python, MATLAB, TensorFlow, and PyTorch.

# Education

**Universitat Politècnica de València***MSc in Telecommunication Engineering | 2022 – 2024*Specialised in advanced communications, signal processing, and AI applications.

**Universitat Politècnica de València***BSc in Telecommunication Technologies and Services Engineering | 2018 – 2022*Solid foundation in telecommunications, programming and applied engineering.

**Stanford Online (Coursera)***Machine Learning | 2022*Completed the foundational Stanford ML course by Andrew Ng.

**Universitat Politècnica de València***Deep Learning Applied to Signal and Image Analysis | Jul 2021*Intensive course on deep learning methods applied to real datasets.

# Publications & Awards

- Reinforcement learning for synchronised flow control in a dual-gate resin infusion system, 45th Risø International Symposium on Materials Science, 2025.  
- Towards Sustainable Precision: Machine Learning for Laser Micromachining Optimization, IDEAL, 2024.

**Best Paper Award – IDEAL 2024**Awarded for the paper 'Towards Sustainable Precision: Machine Learning for Laser Micromachining Optimization'.

# Skills

- Programming: Python, Java, C, MATLAB, JavaScript, HTML, CSS  
- Machine Learning: Deep Learning (PyTorch, TensorFlow), Reinforcement Learning, Computer Vision, NLP, Quantum ML  
- Tools & Platforms: Docker, Git, Linux, Jupyter, Web Scraping  
- Languages: Spanish (Native), English (B2)