

# Antonio García Garví

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I am a researcher and data scientist with five years of experience developing computer vision and deep learning algorithms for biomedical applications. Recently, I have expanded my expertise to classical machine learning and end-to-end data science workflows, including model deployment and system design. I am passionate about applying technology to solve real-world problems and thrive in multidisciplinary, international environments.

## TECHNICAL SKILLS

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- **Programming languages:** Python, Matlab, C
- **Frameworks & Libraries:** PyTorch, Scikit-learn, OpenCV, PIL, Ultralytics, Pandas, NumPy, Matplotlib, Seaborn
- **Tools:** Github, Linux Bash, VSCode, Pycharm

## PROFESSIONAL EXPERIENCE

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### Instituto Universitario de Automática e Informática Industrial

Valencia, Spain

*PhD Researcher – Computer Vision – Machine learning*

*Dec 2021 – Now*

Developed computer vision and ML/DL algorithms to automate *C. elegans* biomedical assays

- Developed and trained deep learning models (CNNs, LSTMs, ViT, GANs, Mask R-CNN, YOLO, U-Net) using Pytorch for classification tasks, object counting, image generation for data augmentation, segmentation, detection
- Curated image datasets, including labeling and integrity testing, for DL model development
- Implemented a synthetic data simulator that increased the accuracy of a DL classifier by 13.6%, reducing labelling costs
- Collaborated with interdisciplinary teams (biologists, clinicians, engineers) to translate technical advances into experimental protocols
- Communicated results and insights in 10 scientific papers, 6 congresses and a PhD thesis

### Universidad Politécnica de Valencia (UPV)

Valencia, Spain

*Teaching assistant*

*Dec 2021 – Jun 2025*

In parallel with my research work, I taught practical courses of different subjects in the Department of Systems Engineering and Automation: prepared presentations and materials, guided/evaluated students

### MRC Laboratory of Medical Sciences, Imperial College London

London, UK

*Visiting researcher – Data Scientist*

*Mar 2024 – Jun 2024*

Research stay at Behavioral Phenomics group, funded by the Ministry of Universities

- Developed ML (Logistic Regression, Random Forest, XGBoost) and DL (CNN-Transformer) models using Scikit-learn and PyTorch to classify *C. elegans* movement patterns for rare disease research
- Held meetings to discuss the results with the biology experts and propose improvements

### Instituto Universitario de Automática e Informática Industrial

Valencia, Spain

*Computer Vision engineer*

*Oct 2020 – Dec 2021*

- Developed computer vision algorithms for sequence classification using OpenCV, Matlab, Numpy and Pytorch

## EDUCATION

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### Universidad Politécnica de Valencia (UPV)

Valencia, Spain

*PhD in Automation, Robotics and Industrial informatics*

*Sep 2021 – Now*

- Awarded a Competitive predoctoral fellowship FPU from the Spanish Government

### Universidad Politécnica de Valencia (UPV)

Valencia, Spain

*Msc in Automation and industrial informatics; GPA: 9.1/10*

*Sep 2019 – Sep 2020*

### Universidad Politécnica de Valencia (UPV)

Valencia, Spain

*Bsc in Industrial Electronics and Automation Engineering; GPA: 8.7/10*

*Sep 2015 – Jul 2019*

- 8 distinctions. Awarded a Collaboration Grant: deep learning algorithms for object classification

## COMPLEMENTARY TRAINING

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**Zrive**

**Madrid, Spain**

*Applied Data Science Program*

*Apr 2025 – Aug 2025*

15-week intensive program covering the end-to-end data science process — from business translation to deployment — through practical, industry-oriented projects

- Hands-on experience across 7 modules: business translation, API integration, EDA, statistical learning, model fitting, model improvement, and MLOps system design
- Applied learning through case studies: financial portfolio optimization (predicting equities outperforming the S&P500) and user purchase intent prediction
- Final industry project: collaborated with a partner company to develop an ML model predicting significant S&P500 surges above defined thresholds
- Mentorship provided by data professionals from Meta, Cabify, Tesco and Scopely

## ADDITIONAL INFORMATION

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- **Languages:** Native Spanish, Fluent English (B2 Cambridge)
- Driving license: B