

María Cribillés Pérez

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🐙 github.com/mcribi/



Education

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- University of Granada (UGR)** Sept 2020 – July 2025
Bachelor's Degree in Computer Engineering
- **Coursework:** Artificial Intelligence, Deep Learning, Machine Learning, Computer Vision, Web Development, Computing and Intelligent Systems.
 - **Cum Laude** in Intelligent Systems Techniques, Machine Learning and Metaheuristics.
- University of Granada (UGR)** Sept 2020 – June 2026
Bachelor's Degree in Mathematics
- **Coursework:** Algebra, Analysis, Geometry, Statistics and Probability, Applied Mathematics.
- University of Trieste (UniTS)** Sept 2023 – July 2024
Bachelor's and Master's Degree in Mathematics
- **Erasmus Program:** One year Erasmus exchange with both master's and bachelor's degree subjects.
 - **Cum Laude** in Technology in Mathematics Education
- Professional School of Music of Granada** Sept 2010 – June 2020
Elementary Degree in Flute 2010-2014
Professional Degree in Flute (specialising in composition and piano) 2014-2020

Experience

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- Researcher at UGR** DaSCI, Granada
Sept 2025 – Present
AI applied to medicine, focused on predicting complications in lung biopsies. Collaboration with medical specialists, analysis of clinical and imaging data, and development of explainable and trustworthy AI methods.
- Research Internship** DaSCI, Granada
March 2025 – June 2025
Three-month internship at DaSCI: research support, liaison with medical specialists, data acquisition and preparation, and design of a protocol for lung biopsy testing.
- Private Teacher** Online
Feb 2023 – Present
Mathematics and programming classes from intermediate to university level.

Projects

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- TFG: Predicting Complications in Lung Biopsies using AI**
<https://github.com/mcribi/TFG> 
- Predictive system for post-biopsy complications. Developed an AI-based model to predict whether CT-guided lung biopsies would result in complications, using 3D medical imaging and clinical tabular data. Explored Deep Learning, Radiomics, pre-trained, and multimodal approaches, evaluated via cross-validation and explainability methods.
 - Tools Used: Python, Scikit-learn, Torchvision, MONAI, Seaborn, Matplotlib, Pandas, Numpy and Pydicom.
 - Mark: 10 of 10.
- Medical Image Segmentation 3D and 2D**
github.com/mcribi/Medical-Segmentation 
- 3D and 2D computer vision project with medical imaging. Analysis of volumetric images through various types of convolutional neural networks (CNN) and segmentation of these images. Dataset KiTS23 (Kidney Tumor Segmentation Challenge 2023)
 - Tools Used: Python

Educational chatbot on Telegram

<https://github.com/mcribi/Educational-programming-chatbot> 

- Educational chatbot awarded best idea in the GranaDev scholarship. Bot for learning to program with exercises, theory, and programming.
- Tools Used: Python, python-telegram-bot (Telegram API), PostgreSQL, SQLAlchemy, Alembic, FastAPI (C++ runner service), Docker, Docker Compose, AWS, Git/GitHub, SQLite.

3D Geometric Modelling and Computer Graphics

<https://github.com/mcribi/IG> 

- 3D visualization project with geometric modelling, hierarchical modelling, animation, cross-platform graphic libraries and interaction
- Tools Used: C++, OpenGL

New Interaction Paradigms

<https://github.com/carmenazorinm/Menu-NUI> 

- Natural User Interface (NUI)
- Tools Used: Unity, C#, Android Studio, Leap Motion

Web Application Development

<https://github.com/mcribi/DAI> 

- Component-based development for web services. Development of advanced client-side applications: programming in web browsers, dynamic HTML.
- Tools Used: HTML, JavaScript ES6, CSS.

Technical Skills

Programming Languages: C++, Python, Java, C, C#, SQL, JavaScript (ES6), Ruby, HTML, CSS, Bash.

Frameworks & Libraries: PyTorch, MONAI, Torchvision, Scikit-learn, Pandas, NumPy, Matplotlib, Seaborn, SQLAlchemy, Alembic, FastAPI, Pydicom.

Tools & Platforms: PostgreSQL, Docker, Docker Compose, AWS, Git, GitHub, Unity, Android Studio, OpenGL.

Specialized Skills: Machine Learning, Deep Learning, Computer Vision, Medical Image Analysis, Web Development, Educational Technology.

Language

Spanish: Native

English: B2 First Cambridge

Italian: B1 Plida

Courses and participations

July 2018: Scholarship from the Spanish Ministry of Education: Science Camp 2018. Astrophysics project at the Teide Observatory.

November 2019: Selected to visit the CERN facilities in Switzerland.

July 2022, 2023, 2024: National meeting of mathematics students in Valencia, Badajoz and Madrid, Spain.

May 2025: ADIA Lab International Summer School 2025 on “Explainable AI” in DaSCI, Granada for master’s and PhD students, featuring high-caliber speakers from diverse backgrounds in xAI and related fields.

July 2025: Winner of the GranaDev Summer of Code scholarship. Awarded as the best open source proposal related to education or other social benefits. Idea: Educational chatbot on Telegram to learn how to code for beginners.

Additional Information

Availability: After February 2026, full geographic and time availability.