

CARMEN GUZMÁN GARCÍA

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ACADEMIC BACKGROUND

Surgical Data Science Summer School (2026)

IHU Strasbourg

Summer School for Surgical Data Science, where 12 computer engineers and 12 clinicians gather together to come up with innovative solutions for surgical problems.

PhD on Biomedical Engineering (2018/2021)

Universidad Politécnica de Madrid

Design of a surgical skills' framework. Validation of the framework through signal analysis, machine learning, natural language processing, deep learning and statistics. Design of a recommendation system for surgical skills

Master's degree on Artificial Vision (2017/2018)

Universidad Rey Juan Carlos

Final thesis focused on the segmentation of healthy and unhealthy lung tissue for tuberculosis' progression assessment

Degree on Biomedical Engineering (2012/17)

Universidad Carlos III de Madrid

Final thesis focused on the quantification of the extracellular matrix through automatic algorithms

Tangent's Healthcare Innovation module (2020)

Trinity College, Dublin, Ireland (online)

Fundamentals of design process, Final project consisted on an application for telemedicine.

WORK EXPERIENCE

Università degli Studi di Parma (2024-)

Researcher involved in the DARE Project. Creation of a webapp to manage patient's data and automatize communications with them. Participation in side projects using Artificial Intelligence to analyze medical images and signals.

Accenture (2023)

Researcher in the Artificial Intelligence Network. Projects in the range of health, agronomy, OCR and Virtual Reality.

Universidad Politécnica de Madrid (2018/22)

Development of the EASIER surgical training platform. Specifically involved in the pedagogical model, the specifications and the integration of an interactive video application within the platform. Also working on an application to automatically assess quality in colonoscopies through deep learning.

Universidad Carlos III de Madrid (2017)

Segmentation of cells for the creation of a database with the aim to assess cell movement and growth.

DIDACTIC EXPERIENCE

Artificial Intelligence for Healthcare (2026)–

14 hours, Polytech Angers

Artificial Intelligence for Materials Science (2025-) – 48 hours, UniPr

Management of Health Data for Dental Hygiene (2025-) – 14 hours, UniPr

Informatics for Veterinarian Sciences (2024) – 60 hours, UniPr

SOFTWARE SKILLS

Matlab



Python



MS Office



C++



SQL



OpenCV



ImageJ



R



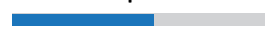
3D Slicer



MongoDB



JavaScript



HTML



Tensorflow



Pytorch



PowerBI



LANGUAGES

English



French



Spanish



Italian

