

Carmen Rubio Garcia

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Education

Universidad Politecnica de Madrid ETSAM | Master and Bachelor in Architecture · 2014 -2021

Thesis: *Data for Understanding Contemporary Cities — Machine learning / urban systems*

Berliner Hochschule für Technik, Berlin | Erasmus, Master in Architecture · 2019-2020

Illinois Institute of Technology IIT, Chicago | Exchange. Bachelor in Architecture · 2017-2018

Experience

Foster + Partners. Design Systems Analyst | London | Research and Development · 2022 - present

Applied research of emerging technologies and develop advanced digital tools and computational workflows supporting architecture, urban planning and engineering teams across the built environment.

Khaybar Masterplan, Saudi Arabia - Urban Circularity

- *Built a GIS digital twin integrating building-level construction data to identify reuse potential and support urban circularity strategies*

Abu Laheq Resort, Saudi Arabia - Environmental Simulation and Optimization

- *Daylight and solar simulation to inform the layout and orientation of the resort*
- *Optimization pipeline to balance solar protection and shading material efficiency across the resort*

AI for Generative Floorplans

- *AI-driven generative workflow for office floorplans, using machine learning to explore spatial configurations and automate aspects of early-stage design*

Intelligent BIM Annotation

- *Automated Revit process that reduced manual annotation tasks by ~70%*

Morph Estudio | Madrid | Research and Development · 2021 - 2022

Raumlabor | Berlin | Architect · 2020

Norman Foster Foundation | Madrid | Summer Internship · 2019

FGP Atelier | Chicago | Internship - 6 months · 2018

Personal Research Projects

Adaptive Building Reuse App - AEC Hackathon London · 2025

Developed a rapid-assessment platform using Kohonen-map clustering to evaluate underused buildings and identify potential adaptive reuse strategies

Moth Grasshopper Plugin · 2024

C# Grasshopper plugin with tools for graph analysis, 3D clustering, and geospatial analysis; 200+ users

Awards

La Caixa Foundation Fellowship | 1 of 100 fellows selected for international postgraduate study · 2026

Aplomo Architecture Competitions | Finalist. Honorific Mention Award · 2021

Deans List IIT | Recognition for outstanding academic performance (GPA 4.0) · 2018

Santander Scholarship | Study-abroad scholarship awarded in recognition of academic excellence · 2017

Skills

Programming | Python · C# · JavaScript · .NET

Complex Geometry and 3D Modelling | Grasshopper · Rhinoceros 3d · Blender

AI / Data | Machine Learning · GIS · Data Analysis · Pandas · Numpy

BIM / Computational Simulation | Revit · EnergyPlus · Ladybug · Environmental Simulation