

David Alejandro Ramírez Cajigas



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Driving License: Class B License
Location: Spain
Languages: Spanish (Native), English (Intermediate)

Education

2023–Present

Ph.D. Candidate in Territory, Infrastructure, and Environment

- University of Castilla-La Mancha (UCLM), Spain; Thesis on MaaS and transport optimization, designing a demand-responsive transport system for the 919 municipalities of Castilla-La Mancha; School of Civil Engineering

05/09/2025

Official Recognition of Master's Degree in Civil Engineering

- Ministry of Science and Innovation, Madrid; File No. /2025/H06782 – CSV: GEN-82b5-fc1f-37f1-ed27-a04a-64c9-0d01-9777

10/2020–01/2022

Master's in Transportation, Territory, and Urbanism

- Universitat Politècnica de València (UPV), Spain; Master's Thesis (Grade: 10/10) "Development of the Dgis tool for evaluating public transport accessibility. Practical application in Santiago de Cali (Colombia)" – Download

01/2013–03/2018

B.Sc. in Civil Engineering

- Pontificia Universidad Javeriana, Colombia; Bachelor's Thesis (Grade: 4.9/5) "Design of the spatial distribution of MIO system routes according to perceived service quality (Commune 18)" – Download

Continuing Education

11/02/2025–07/05/2025

University Expert Certificate in Technologies and Tools for Transport Digitalization

- Universidad Politécnica de Madrid (UPM), 125 hours, 15 ECTS; Big Data, AI, Machine Learning, Cloud, BIM, Digital Twins

07/2022–12/2022

English as a Second Language (275 h)

- University of Calgary, Canada

Tools: Python (*Pandas*, *GeoPandas*, *Jupyter*), MATLAB, ArcGIS Pro, QGIS, OSRM; Docker, Visum, AutoCAD, Revit, Civil 3D; Microsoft Office

Profile

Civil Engineer from Pontificia Universidad Javeriana (Colombia); Master's Degree in Civil Engineering (Roads, Canals, and Ports) (officially recognized in Spain) and a Master's in Transport, Territory, and Urbanism from the Universitat Politècnica de València. Currently a PhD candidate in Territory, Infrastructure, and the Environment at the University of Castilla-La Mancha. Experience in civil works management, infrastructure project management, and software development for accessibility analysis. Specializing in MaaS, DRT, and route optimization using Python, MATLAB, ArcGIS, Docker, and OSRM.

Professional Title:

Civil Engineer (M.Sc.) · Master's in Transportation, Territory, and Urbanism · Ph.D. Candidate in Territory, Infrastructure, and Environment

Specialization:

MaaS, Route Optimization, Big Data, Urban Planning

Interests:

Research, infrastructure, science, technology

Professional License:

Institution of Civil Engineers (Spain), License No. 37028

2023

MATLAB Onramp

- MathWorks.com; Data analysis and scientific programming

2020

Airport Engineering: Airside Design

- edX – UPValenciaX; Official ICAO MOOC

2019

Revit Architecture – Basic Level

- UPV; BIM Modeling with Autodesk Revit

Experience

02/2023–05/2025

R&D Researcher (Mob&UP)

- UCLM; EsMaaS Project (TED2021-129623A-100); DRT heuristics, territorial clustering, and accessibility analysis using Python, MATLAB, ArcGIS, OSRM

01/2021–12/2021

Civil Engineer

- Freelance Projects, Cali; Construction management and supervision; AutoCAD, Revit, quality control

2016–2019

Engineering Coordinator / Auditor

- Productivos.org, Cali; Online platform for business evaluation and training

12/2016–06/2017

Resident Civil Engineer

- Constructora Bolívar, Cali; On-site engineer

Projects and Publications

Highlights:

EURE – Rev. Est. Urbano-Reg. 51 (153), 2025 · IGC – Int. Geographical Congress Dublin 2024 (presenter) · FIT – V Scientific Campus, Madrid 2024 (presenter) · EUGEO – European Congress of Geography, Barcelona 2023 · EsMaaS Project TED2021-129623A (researcher at UCLM 2023–25) · DGIS – MATLAB accessibility tool · Civil works: construction of private residential complexes · Co-authored 4 books and published in journals (2021–24).