

Guillermo D'Angelo

GEOSPATIAL DATA ENGINEER · GIS DEVELOPER

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Summary

I'm a geographer, geospatial specialist and GIS developer, with a rich background in data-related projects spanning over a decade.

I'm the Head of Geomatics at Uruguay's National Statistics Institute. In this role, I lead a dedicated team of GIS specialists, overseeing GIS analytics, geocoding, cartography production, and spatial analysis. In addition to my governmental position, I'm a freelancer, working on diverse projects that demand expertise in geospatial technologies and data analysis.

My proficiency includes programming in Python and SQL, enabling the development of robust data-processing and analysis pipelines.

I have extensive knowledge of QGIS, with expertise in PyQGIS scripting for automation across a wide spectrum of processes. I also possess hands-on experience with ArcGIS, PostGIS, pgRouting, GDAL and rasterio.

For web-mapping projects, I leverage technologies such as Leaflet and Mapbox to create interactive maps.

Other technologies I have worked with include Docker, Git, R, Django and Google Cloud.

I'm passionate about acquiring new skills and applying them to real-world problems.

Education

University of the Republic, School of Science

Montevideo, Uruguay

MAJOR DEGREE IN GEOGRAPHY

2008 — 2016

- Oriented towards techniques for spatial analysis
- Thesis: Risk analysis of the coastal zone of Canelones Department, Uruguay [🔗](#)

University of the Republic, School of Social Science

Montevideo, Uruguay

MASTER IN DEMOGRAPHY AND POPULATION STUDIES

2018 — Present

- Ongoing master thesis

Skills

Programming	Python, R, JavaScript, Jupyter Notebooks
Databases	Postgres, PostGIS, pgRouting, MongoDB
GIS Software	QGIS, ArcGIS Pro, Rasterio, GDAL, SAGA, GeoServer
Remote Sensing	ESA SNAP, Orfeo ToolBox, GRASS
Data Visualization	Matplotlib, plotly, Streamlit, leaflet, Looker
Design	Adobe Photoshop, Adobe Illustrator, HTML, CSS
Languages	English, Spanish (native speaker)

Experience

National Statistics Institute

Uruguay

HEAD OF GEOMATICS

February 2026 — Present

- Lead a team of analysts
- Geospatial data wrangling, analysis, and visualization in Python and QGIS
- Webgis development and geospatial data management
- PostgreSQL and PostGIS database administration
- Report writing and review

Several Clients

Remote

GEOSPATIAL SPECIALIST FREELANCER

June 2021 — Present

- Worked on several projects for clients based the US, Canada, UK, Germany and Uruguay
- Developed geospatial processing pipelines
- Performed spatial data production, wrangling, and analysis
- Webmapping and geospatial data visualization

Ministry of Social Development

TEAM LEADER, GIS DEVELOPER AND ANALYST

- Manage a team of GIS specialists
- Perform data wrangling, data analysis, and spatial analysis in Python and QGIS
- Created automations in internal web apps
- DBA and ETL processes
- Produce and oversee cartography
- Write reports, and review reports written by other team members
- Staff training

Uruguay

June 2014 — January 2026

Department of Geography, Ministry of Social Development

GIS TECHNICIAN

- Perform data wrangling and geocoding
- Produce cartography and report writing
- Manage staff training
- Conduct fieldwork

Montevideo, Uruguay

Nov. 2011 — June 2014

Department of Geography, School of Science

LECTURER AT THE UNIVERSITY OF THE REPUBLIC

- Delivered theoretical lectures in human and economic geography
- Participated in fieldwork planning
- Performed cartography, data wrangling and data mining

Montevideo, Uruguay

Oct. 2013 — Sep. 2021

Courses

2023	Computer Vision and Deep Learning in Satellite Imagery , Deep Field Geo Treinamentos e Consultorias	On-line
2022	NoSQL concepts , DataCamp	On-line
2019	Advanced course in GIS (ArcGIS Pro) , National Geographic Institute of Spain	On-line
2019	Urban informatics: Data Processing and Data Analytics , School of Engineering, University of the Republic	Uruguay
2019	Seminar on Geographic Information Management , National Institute of Statistics and Geography	Mexico
2018	Acquisition, Processing, Quality Control, and Data Models of Photogrammetric Flights Products , Topocart LTDA	Uruguay
2018	Basic course in ArcGIS , National Geographic Institute of Spain	On-line
2018	Spatial Data Infrastructures , Spanish National Geographic Institute	On-line
2018	Introduction to SAR Remote Sensing , National Space Activities Commission	On-line
2017	Introduction to Remote Sensing , National Space Activities Commission	On-line
2017	Seminar on the Application of Astronautics and Satellite for Developing Countries , Nanjing University of Information Science and Technology	China
2017	From Complex Networks to Social Networks: introduction to Big Data , Interdisciplinary Space, University of the Republic	Uruguay
2016	Introduction to Social Network Analysis , Catholic University of Uruguay	Uruguay
2016	Geoservices with GeoServer , gvSIG Association	Uruguay
2016	Introduction to GeoServer , Free Open Source Software for GIS Argentina	Argentina
2016	Social perception of Coastal Risk as a Tool for adaptation to Global Changes , School of Science, University of the Republic	Uruguay
2016	Risk Terrain Modeling for Crime Prediction , Rutgers Center on Public Security	Uruguay
2014	Introduction to PostGIS , gvSIG Community Uruguay	Uruguay
2011	GIS and Geographic Information Quality , School of Engineering, University of the Republic	Uruguay
2011	Introduction to R Programing , School of Science, University of the Republic	Uruguay

MOOCs

2022	Django for Everybody Specialization , Coursera
2020	Introduction to Data Science in Python , Coursera
2020	Applied Machine Learning with Python , Coursera
2020	Applied Plotting, Charting, and Data Representation in Python , Coursera
2020	Applied Social Network Analysis in Python , Coursera
2020	Spatial Data Science and Applications , Coursera
2020	Advanced Relational Database and SQL , Coursera
2018	Google Earth Engine for Remote Sensing and GIS , Udemy

Conferences

SPEAKER

FOSS4GIS 2021

SPATIAL INTERACTION MODELS, INTERNAL MIGRATION, AND FOSS4GIS 

Buenos Aires, Argentina (on-line)

Sept. 2021

21st Century Geographers

RISK ANALYSIS OF THE COASTAL ZONE OF CANELONES DEPARTMENT, URUGUAY

Montevideo, Uruguay

Dec. 2017

31st National Conference of Geography and the Environment

RISK ANALYSIS OF THE COASTAL ZONE OF CANELONES DEPARTMENT, URUGUAY: GEOGRAPHIC INFORMATION AS A TOOL FOR LAND MANAGEMENT

Montevideo, Uruguay

Sept. 2017

Free Open Open Source Software for GIS Argentina

OPEN GIS FOR PUBLIC SOCIAL POLICY

Buenos Aires, Argentina

April 2016

3rd Workshop of gvSIG Uruguay

GIS FOR PUBLIC SOCIAL POLICY TARGETING 

Montevideo, Uruguay

Oct. 2014

PARTICIPANT

GeoPython 2021

PYBASEL

on-line

April 2021

Eighth Latin-American and Caribbean Workshops of gvSIG

GVSIG ASSOCIATION

Montevideo, Uruguay

Oct. 2016

Third Workshop of Cartography

PANAMERICAN INSTITUTE OF GEOGRAPHY AND HISTORY AND THE MILITARY GEOGRAPHIC SURVEY OF URUGUAY

Maldonado, Uruguay

Oct. 2015

Fifth National e-Governance Conference

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Montevideo, Uruguay

Dec. 2012

First Latin-american Conference of Urban Studies

NATIONAL UNIVERSITY OF GENERAL SARMIENTO

Buenos Aires, Argentina

Aug. 2011

Publications

Risk analysis of the coastal zone of Canelones department, Uruguay: geographic information as a tool for land management

FIRST WRITER

Santiago, Chile

Jul. 2017

Published in *Revista Geográfica*, annual journal of the *Panamerican Institute of Geography and History*

Use of QGIS at the Ministry of Social Development of Uruguay

WRITER

Online

Aug. 2017

QGIS Case Study