

ÁLVARO ARREDONDO PARRA

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WORK EXPERIENCE

FELT

MADRID, SPAIN • REMOTE

Data Curator

MAR 2022 – MAR 2026

- Building and maintaining the Felt Library, a collection of cartographically-ready layers from open data sources like OpenStreetMap or the U.S. Census Bureau
- Development of Upload Anything, a scalable data ingestion pipeline for user-uploaded data
- Integration with a wide array of external data sources, such as traditional and OLAP databases (BigQuery, Snowflake, etc), Esri and OGC services, STAC APIs or cloud storage buckets
- Leading a number of user-facing and internal projects such as Felt's Help Center or YouTube channel
- Data and product strategy

FREELANCE

MADRID, SPAIN • REMOTE

Data Engineer / Data Scientist

MAY 2021 – PRESENT

- Development for CARTO's Spatial Extension in Postgres and Amazon Redshift
- Data Analytics & Python instructor in bootcamps and Master's programs
- Automation of business processes and data analysis

CARTO

MADRID, SPAIN • REMOTE

Data Scientist

JUN 2019 – FEB 2021

- Architect and main developer of the Data Observatory, a catalog of public and third-party data for geospatial enrichment and analysis.
- Data Science consulting services for large international clients.

GEOGRAPHICA

SEVILLE, SPAIN • REMOTE

Backend Engineer/Data Scientist

MAR 2018 – JUN 2019

- ETL and API development and database management for large projects with international clients.
- Usage of Machine Learning techniques for statistical modelling and predictions.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT)

CAMBRIDGE, MASSACHUSETTS

Visiting student

SEP 2017 – DEC 2017

- Research on river network geometries and their relationship with climate.
- Data wrangling, visualization and experimental analysis of geophysical models.

GERMAN RESEARCH CENTER FOR GEOSCIENCES (GFZ)

POTSDAM, GERMANY

Intern in Section 1.4: Remote Sensing

MAR 2015 – MAY 2015

- Development of a workflow for automatic water body delineation based on RapidEye satellite time series using ArcGIS and R.

SKILLS

- Regular and spatial data analysis and visualization in R and Python.
- Large, complex ETL pipeline development and maintenance (Airflow, Celery).
- Database architecture and management (PostgreSQL, BigQuery, Redshift, Snowflake, etc)
- Cloud providers: AWS, GCP and Microsoft Azure.
- Fluency with Unix-based terminals and working on remote machines.
- API development in Python (Flask, aiohttp, etc) and Node.js (Express).
- Geographical Information Systems (ArcGIS, QGIS) and Remote Sensing (SNAP, ERDAS, ENVI).
- Statistical and ecological modeling. Machine learning and computer vision.
- Good teamwork and leadership skills. Excellent verbal and written communication.

EDUCATION

TECHNICAL UNIVERSITY OF MADRID (UPM)	MADRID, SPAIN
MSc in Geodetic and Cartographic Engineering	2016 - 2019
· Thesis using ML and Computer Vision for seismic risk assessment · Passed with Honours	
BSc in Environmental Engineering	2011 - 2015
Extraordinary performance diploma	2012
UNIVERSITY OF POTSDAM	POTSDAM, GERMANY
Erasmus scholarship. Courses in geostatistics and atmospheric sciences	2014 - 2015

PUBLICATIONS

- Torres, Y., Martínez-Cuevas, S., Molina-Palacios, S., Arranz, J. J., & Arredondo, Á. (2023). Using remote sensing for exposure and seismic vulnerability evaluation: is it reliable? *GIScience & Remote Sensing*, 60(1).
<https://doi.org/10.1080/15481603.2023.2196162>
- Yi, R. S., Arredondo, Á., Stansifer, E., Seybold, H., & Rothman, D. H. (2018). Shapes of river networks. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, 474(2215), 20180081.
doi: [10.1098/rspa.2018.0081](https://doi.org/10.1098/rspa.2018.0081)
- Martín, I., Arredondo, Á, & Vélez, Y. (2014). *Anfibios y reptiles del Parque Nacional Las Tablas de Daimiel*. Madrid: Ministerio de Medio Ambiente y Rural y Marino. ISBN: 978-84-8014-865-8

ADDITIONAL INFORMATION

- Languages: Spanish (native), English (native), French (adv.), German (adv.).
- Broad experience in volunteering and community service.
- Hobbies include amateur acting, choir singing, playing music and mountain sports.

VOLUNTEERING

First response during the refugee crisis with Lighthouse Relief in Lesbos, Greece	2016
Ecological farm development in The Garden Estate, Sri Lanka	2015
Counselor in Pléyades 569 Scout Group	2011 - 2020
Mountain guide for the blind in FEDE	2011