PORTFOLIO

EMMA _ GARCIA BOADAS



I´m a Geology Student from Catalonia, Spain.

I have had the privilege of receiving an Erasmus & funded scholarship for the joint programme Copernicus Master in Digital Earth which I am undertaking at Paris Lodron University Salzburg (PLUS) and Palacký University Olomouc.

During my first year at Salzburg University I progressed with my knowledge and ability within the topics of Data analysis, remote sensing and spatial data. I was lucky to expand my working knowledge with ArcGis Pro, eCognition, R and Google Earth Engine (GEE).

I then moved to the eastern Czech Republic city of Olomoucs, to commence my final year of my Masters degree in which I focused on Cartographic production and design and geovisualisation. I learned the skills of creating interesting infographics and meaningful data visualisation that was easy to comprehend and well designed using creative suites like Adobe.

This Portfolio is a short reel of what I have created in the past two years during my Masters.







Palacký University Olomouc



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MAPS

The following series of Maps show some demographic characteristics of Czech Republic.









MARRIAGES Proportional Symbols Czech Republic, administrative districts communes, 2023



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Poulation Density Map

The choropleth map represents the population density of the Czech Republic.

POPULATION DENSITY



Population Density Map Respect Average

The bivariate choropleth map represents the population deviation density of the average population of the Czech Republic.

Czech Republic, administrative districts communes, 2023



Population Density and Migration

The choropleth map of population density has superposed data on population migration, with infill hashed effect, in the different communes in the Czech Republic.

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Czech Republic, administrative districts communes, 2023





Marriages

The graduated map for the Czech Republic represents the number of marriages. The symbol is graduated, meaning the values are compressed between ranges in the representation.

MARRIAGES Graduated Symbols



Marriages

The proportional map for the Czech Republic represents the number of marriages in a more realistic way. The symbol is proportional to the actual value of the marriage number. This visualization is more representative of reality.

MARRIAGES Proportional Symbols



POSTERS

The following maps were created during the past few semesters in Olomoucs, Czech Republic and are sequentially ordered from one to four.

The aim of the posters was to showcase my ability to create compelling infographics and visualise large amounts of data in an interesting layout.



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Population Density and Eco-Agriculture

The poster shows the density of ecological agriculture using a density dot method and the density of the population using a choropleth map of Catalonia.



Eco Agriculture & Population

Catalonia, municipalities population density and Eco Agriculture exploitations, 2022

The higher concentration of eco agricultural exploitations and rally high concentration of population. This area is where you find the capital of Catalonia.



sity of Salzburg University and Palacký University Olomouc, the data used: Open Street Maps and IDECAT, the map is for educational proposes.

Esri, NASA, NGA, USGS



La Palma island

The poster of La Palma island is an excellent artistic visualization of the topography and geography of the island.

CANARY ISLANDS La Palma ,Spain

Los Llanos de Aridane



North Atlantic Ocean

\Lambda Camp Sides

- Wilderness hut
- Shop SupermarketShop Convenience

Secondary Road Primary Road

Residential Areas
Island Land Area
Island Water Boundary Buffer

La Palma island is the 9.45% of the Canary islands territory and have a surface of 708,32 km².





Esri, NASA, NGA, USGS

The Balkans Tourist Potential

This poster shows the potential for tourism in the Balkan countries based on attractiveness and infrastructure in 2022.

It is a multivariate map is used to represent the number of facilities available in the Balkan to represent the number of tourist points in each aggregated region.



The Balkan countries are a south-eastern European region that is home to a diverse range of countries, cultures, and landscapes. The region is known for its stunning hatural beauty, rich history, and warm hospitality. In recent years, the Balkans has become an increasingly popular tourist destination, and for good reason. In the following map you will find a visual representation of the tourist potential based on tourist infrastructure (shop: mall, department store, supermarket, convenience, amenity: shower, ATM, restaurant, fast food, cafe, tourism :hotel, hostel, motel, guest house, alpine hut, camp site) and features of tourist attractions (tourism: attraction, museum, picnic viewpoint, waterfall, cave entrance, rock, beach, beach resort, swimming area, monastery, castle, fort, monument, ruins, city gate, tower) from the OSM database.



High attractions density

High attractions and high infrastructure

Country Bounda

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The Catalonia Hydric Drought

This poster shows the hydric stress causing Catalunya to suffer a severe drought in 2023. The main map shows the choropleth representation of the population and the proportional symbols of the damps in the internal basins of Catalunya. The graphs on the base show the impact of drought on the dams, which is the decrease in water volume over time. Another element of the poster is the infographic owere, which summarizes the water consumption across Catalonia and the natural reserve of water.

CATALONIA THE WATER CHALLENGE nce 2022, Catalonia has been in a drought. nt of Catalonia has an entity called Agencia Catalana de l'Aigua (ACA). However, the ontrols hydrology resources, specifically the internal basins. This poster shows the ACA is managing and the entire population's water consumption to grasp an idea **POPULATION WATER INTERNAL BASINS CONSUMPTION 2022 TOTAL 2023** 100% /! Basin 10/12/2023 18% Tarragona 60% 40% domestic 44% other 5% Water Water counsum opulation density (pop./km² counsun agriculture 36% 48% 52% Territory Territory 20 km 8% 92% **DAM VOLUME hm³** of populatio of popula Catalunya Boundar Catalunya Basins 01/01/2000 - 30/10/2023 Catalunva main city



DIGITAL

The following links are some examples of digital creation and interactive queries using SQL and ArcGis story maps.

The aim of this was to learn techniqes to digitalise information in a pleasing visual way.



Barcelona Markets: historical and cultural city essentials

The Markets in Barcelona are part of the culture of the city and also some of them are emblematic architectonic buildings. Most of the citizens use them to realize they diary groceries.

This ArcGis story map's aim is to create different distance analyses and network analysis. The target is to analysis the relations thought the Municipal Markets of the city , specific address far of the city center (Home) and the Market distribution hub.

https://storymaps.arcgis.com/stories/093644c243224e3cb9c8b5421d31c911



SQL for spatial queries

This Document explores different combinations of spatial operations with SQL queris:

Selecting by non-spatial attributes. Selecting data by spatial properties. Selecting data by location. Combination of spatial operations.

https://egarcibo14.github.io/wp-content/uploads/2022/12/Assigment3_E06_EGBs1093348_query.pdf

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- Dr. Radek Barvir
- Ph.D. Candidate Jakub Koníček
- Dr. Alena Vondráková

My time spent here has been incredibly insightful and I am looking forward to progressing further with the knowledge I have aquired.

> EMMA _ GARCIA BOADAS



in Digital Earth