IronHack Paris

Sustainable Development

Are countries contributing in making the world a better place?

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1 Collecting data

Using API, Web scraping and WBPAGI

2 Cleaning and sorting

Using MySQL: Creating, cleaning, altering, droping ...

3 Normalizing/ composite indicator

Implementing a scoring method

Processing

Where do you go from just collecting data?

Challenges

1. Effective communication
2. Understand the deliverables in the context of our project
3. Collecting data with diffrent methods
4. Excuting the code and the methodology
5. Working under pressure

ER Model

Countries

- Country ID
- Population
- GDP
- School Enrollement
- CO2 Emissions
- Life expectancy
- Poverty gap at 1.9$ a day
- Region ID

Regions

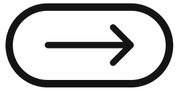
- Region Name
- Region ID
- CO2 Emissions/ region
- Primary Energy
- Primary energy/ capita

Kyoto agreement

- Country
- Kyoto target 2008–2012
- Kyoto target 2013–2020
- GHG emissions 2008–2012 including LULUCF
- GHGemissions 2008–2012 excluding LULUCF

Science Projects

- ID
- Project Keywords
- Coordinator
- Country



Methodoloy for the composite indicator

We opted for a scoring system after we normalized the data. The higher the score the better the country is contributing for a better world.

- **Compare up to 5 countries at a time!**

CO2 emissions

When the CO2 consumption < 0.25 = **3p**
When the CO2 consumption < 0.5 = **2p**
When the CO2 consumption < 0.75 = **1p**
ELSE 0

Kyoto agreement

If the country signed the kyoto agreement = **1p**
ELSE 0

Energy/Cap

Energy_cons/cap < 0.25 = **3p**
Energy_cons/cap< 0.5 = **2p**
Energy_cons/cap < 0.75 = **1p**
ELSE 0

N° Project

If projects per country = 0 Then **0p**
f projects per country< 6 Then **1p**
f projects per country< 10 Then **2p**
ELSE 3

Raw Data

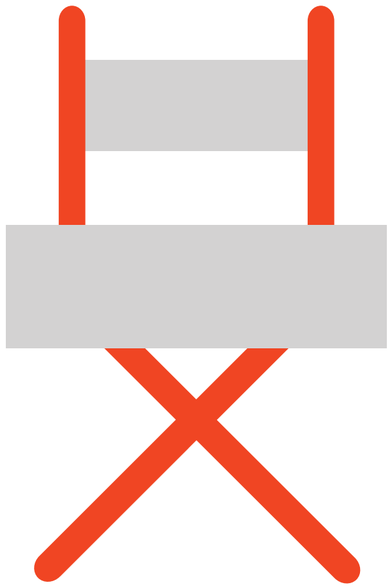
Country_ID	CO2 emissions	Kyoto	Energy_cons/cap	Num project
Brazil	2.04187	NULL	49.9	NULL
China	7.40521	NULL	59.6	NULL
Germany	8.55839	Germany	113.6	6
Spain	5.52035	Spain	113.6	20
USA	15.2409	NULL	216.8	2

Normalized

Country_ID	CO2 emissions	Kyoto_norm	Energy_cons/cap	Num project
Brazil	0.0622334	0	0.130388	0
China	0.227823	0	0.16552	0
Germany	0.263426	1	0.361101	6
Spain	0.169629	1	0.361101	20
USA	0.469743	0	0.734879	2

Final

Country_ID	Emissions_points	Kyoto_norm	Consumption_Points	Project_Points	Total_Points
Brazil	3	0	3	0	6
China	3	0	3	0	6
Germany	2	1	2	2	7
Spain	3	1	2	3	9
USA	2	0	1	1	4



Demo

Sources

“Citizen.science.” EU, https://eu-citizen.science/.

“Kyoto Protocol.” Wikipedia, Wikimedia Foundation, 11 Dec. 2021, https://en.wikipedia.org/wiki/Kyoto_Protocol.

“Review of Economics and Statistics 2021 Annual Report.” The Review of Economics and Statistics, vol. 103, no. 2, 2021, pp. i-ii., https://doi.org/10.1162/rest_e_01022.

“World Bank Group - International Development, Poverty, & Sustainability.” World Bank, https://www.worldbank.org/en/home.