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**GitHub Repo:** <https://github.com/skotchar/FinalProject_ITSC3155>

**IDEA #1:**

**Data set:**

<https://www.who.int/data/gho/data/indicators/indicator-details/GHO/number-of-infant-deaths>

**About:**

This data set is created and maintained by the World Health Organization, and it lists the number of child mortality in different countries for previous years. Child mortality is defined on the website as any deaths occurring to an infant under the age of one. The death numbers are stated to be estimates and are given a range alongside the estimate number. The death numbers are also divided into three categories: male, female, and both (which is the total). The data set does not describe the causes of deaths or the exact locations of the deaths in each country.

**Customers:**

Our primary audience, who is also our customers, will be people who want to immigrate to other countries to live there, or tourists that wants to live in another country for a prolonged period of time. Our product will also apply to people who want to start a family in a new country.

**The Problem and the Solution:**

How can someone feel comfortable to make a decision to live in another country? Specifically, if someone wants to understand the quality of health of a certain country before moving there, what measures and indicators can they use? In order to ensure a safe lifestyle in a new country, a person should have a general understanding about the quality of health in that nation, and one such indicator of health is the mortality rates of infants. The solution is to give people access to knowledge and information about the infant death rates in previous years so they can have an idea on the healthcare and quality of life in countries of interest. By staying informed on the topic, people can be more aware on the current health situations in different country before they make a decision to move there to live.

**Product Vision:**

For anyone who wishes to start a new life or family in a foreign country, Health Path is a web program that will provide crucial information about the indicators of the health quality in countries such as infant mortality for each year. Unlike organizations such as the CDC and WHO, our project will help users to find information they need to know instead of just providing statistics for users to find.

**Major Features:**

* Allowing users to search up countries based on name, high/low death rates, current population, and other factors.
* Allowing users to give an estimate for death rates in future years using a linear relationship based on previous years’ data.
* Showing a heat map of the world. Countries will be colored based on the amount of child mortality with or without being proportional to its population.
* Showing the data in other graphs, such as bar graphs and line graphs.

IDEA #2

[CO2 emissions (kt) | Data (worldbank.org)](https://data.worldbank.org/indicator/EN.ATM.CO2E.KT)

3. This data set gives the total number of CO2 emitted into the atmosphere per country from 1960 to 2020. Not all countries in the data set have data for CO2 emitted per year however due to political matter or they do not keep records of such data. The data set is divided into categories:

* Country Name: the name of the country
* Country Code: abbreviated name for each country (important for lookup info for other data included in the set)
* Indicator name: Dataset title
* Indicator code: identifies which standard the information is in (measurement system)
* Years(as separate colms) starting from 1960 to 2020: the actual total number of CO2 emitted for that year.

Countries that have no data need to be omitted from calculations.

4. The customers for this dataset would be governments to make better plans, or policies that can help reduce or limit CO2 emissions, and Energy companies to decide whether to switch to more cleaner energy sourced.

5. The problem this dataset solves is which country produces the most CO2 emission and needs more policies and plans to cut CO2 emissions. The main problem that this dataset can solve is global warming and how much each country contributes to global warming.

6. My product vision is to aid governments and energy companies to make better choice when it comes to energy production and its affect on the global environment compared to other solutions. This product can be useful for society by setting goals and limit to the amount of CO2 emitted.

7. Major features will include:

* Predicted reduction: this give the predicted outcome if a policy is passed to limit CO2 emission verse if this policy is not enacted.
* Current standing: show which countries need to limit their CO2 emissions.
* Compare Countries: show the differences between two countries. Filters can define countries by economic standing and per capita.
* Ten-year outlook: Predicts the next ten years biased on average emissions from the previous 10 years.

IDEA #3

**Data Set 1: Access to electricity (% based on population) by the WHO:** [**https://databank.worldbank.org/source/world-development-indicators#**](https://databank.worldbank.org/source/world-development-indicators)

**Customers/Solution:**

Power companies and Non-Profit companies. I say theses would be the two biggest customers to the website using this data set because the power companies would use this knowledge to know where to expand their company to next open location. Non-Profit companies would also benefit from this dataset because they would have a better idea where they need to go to help people create electricity for basic utilities. The issue that this dataset will solve is making sure that everyone on this planet has access to electricity by telling companies where electricity is needed.

**Product vision:**

This product is for non-profit companies looking to help locations without electricity and need electricity. Our website will be called Electricity without borders. This website will be up so that non-profits can plan their next step or location and know the map better without as much research. This website isn’t like others like engineers without borders because its goal is to only show customers locations without electricity and are in need of some.

**Major Features:**

- global map with color that tells the amount of electricity access

- easy access to information and option, easy to see, and clean interface

- have the option to find top places with highest and lowest stats

- find data based on specific region/area

IDEA #4

**World Health Organization (WHO):**

<https://www.who.int/data/gho/data/indicators/indicator-details/GHO/concentrations-of-fine-particulate-matter-(pm2-5)>

**Description:** SDG Indicator 11.6.2 Concentrations of fine particulate matter (PM2.5) in different locations. Data is further split into total PM, PM in urban, and PM in rural areas in each location/country.

**Customer(s):**

* People that would like to move to a different country
* Scientists that analyze and compare particulate matter for health and research purposes
* Governments that want to readily compare their particulate matter to other regions or countries.

**Problem and Solution:**

* The problem that this project tackles is pointing out  the wide distribution and increased levels of particulate matter that are a show of pollution and also can cause health problems such as lung cancer, asthma, and other respiratory issues.
* The project helps identify places with high particulate matter so that people will be able to prevent the risk of these various health problems if they decide to move there.
* The project also helps compare particulate matter levels to see how high some places are compared to the average or compared to their surrounding so that it can bring awareness to reducing particulate matter levels in these places.
* This is very necessary because particle matter is not something that can be easily seen with the eye since particle matter is very small. Even though Particle matter is very small and can’t be seen directly in the air, it can still be deadly in contrast to its appearance, having the ability to pass through your respiratory system and infiltrate through your lungs. This project will identify these places that pose a risk to people.

**Product Vision:**

* This PM Locator is for the general population of people who are looking into moving to a different country. This product PM Locator is a travel and environment product that will allow people to identify the risks of moving to a certain country based on the PM levels and based on their background of respiratory problems. Unlike, qz.com, that lists the particle matter based on each country, PM Locator will display graphs to compare and analyze the particle matter information and identify different countries with different ranges of particulate matter.

**Major Features:**

* Choose display of countries with smallest levels of PM
* Choose display of countries with largest levels of PM
* Search PM based on country
* Search PM based on region