Project Proposal

Global Energy Consumption (2000-2024)

### Team members:

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### Research Questions:

1. How has global energy consumption changed between 2000 - 2024, and which regions have experienced significant increases?
2. How has the share of renewable energy changed over time, and which countries have made the most progress in reducing fossil fuel dependency?
3. What is the relationship between household energy consumption and total energy consumption across different countries?
4. How have carbon emissions evolved alongside energy consumption, and which regions have shown the greatest reductions or increases in emissions?

### Why Global Energy Consumption dataset?

This project aims to understand the relationship between countries and energy usage over the years. We are specifically interested in the economy and global inequality. Energy serves as both a fundamental resource and an indicator of economic development. By analyzing energy consumption trends, we can identify disparities in resource distribution and economic growth using the Energy Price Index. Additionally, we can examine high-consumption regions, carbon emission rates, and the impact of renewable energy. Understanding these patterns can help us provide insights into the sustainability of current energy practices and support policies aimed at reducing economic disparities and promoting renewable energy adoption.

### Dataset:

* Source: Soundankar, A. (2024). *Global energy consumption (2000-2024)* [Dataset]. Kaggle.<https://www.kaggle.com/datasets/atharvasoundankar/global-energy-consumption-2000-2024>
* Columns: 10 (2 categorical and 8 quantitative)
  + Country: Country name (e.g., USA, China, India)
  + Year: Year (2000-2024)
  + Total Energy Consumption (TWh): Total energy consumption in terawatt-hours
  + Per Capita Energy Use (kWh): Energy consumption per person
  + Renewable Energy Share (%): Percentage of renewable energy used
  + Fossil Fuel Dependency (%): Percentage of fossil fuel usage
  + Industrial Energy Use (%): Energy consumption by industries
  + Household Energy Use (%): Energy consumption by households
  + Carbon Emissions (Million Tons): Carbon emissions generated
  + Energy Price Index (USD/kWh): Average energy price index /
* Rows: 20,000+