Research Task: To estimate a model of greenhouse gases and average global temperature and test if there is a statistically significant effect.

Data Features:

Response variable: Average global temperature

Explanatory variables: co2 and ch4

There are one response variable and two explanatory variables. Both response and explanatory variables are quantitative. Both explanatory variables have positive effect on the response variable.

Analysis Strengths: There is an obvious linear trend. It is straightforward to show the correlation. It also has large sample.

Analysis Weaknesses: The model dose not explain causation. Measuring of global temperature is hard to achieve.

Alternative Example:

Response Variable: Body mass Index

Explanatory Variable: Weight, height

<https://www.kaggle.com/yersever/500-person-gender-height-weight-bodymassindex>

People who are taller or weight less tend to have lower BMI. With the same weight, tall people usually are leaner. With the same height, people who weight more have more body fat.