Research Task: To estimate a model to predict the record time in Scottish hill races using race distance and hill climb.

Data Features:

Response variable: record time (Quantitative)

Explanatory variables: the race distance (Quantitative) and the hill climb (Quantitative)

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 a large sample.

Analysis Weaknesses: The model dose not explain causation. There are outliers that would affect the prediction.

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.