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Data-set: <https://www.kaggle.com/datasets/uom190346a/sleep-health-and-lifestyle-dataset>

**Question 1:**

In one plot show how daily-steps influences heart-rate, while also *visually* factoring in the influence of stress level on both of these variables.

**Question 2:**

Create a visual that clearly indicates the probability that someone is a doctor *given* that they are a female (percentage is fine as opposed to proportion).

**Question 3:**

Create a grouped bar-chart using sleep disorder and bmi category to see the distribution of sleep disorders within each bmi category.

**Question 4:**

\*Not related to the data-set\*

Extensive testing has shown that covid-19 is prevalent in the general population at 2% of people. You have developed a new ***rapid test*** that returns a positive result 1.9% of the time when used on the general population. For people who have covid-19 (as assessed by a more rigorous test) the ***rapid test*** returns a positive result 90% of the time.

What is the probability that someone has covid-19 if they receive a positive result with this test?

P(covid | +) = ????

P(covid) = .02

P( + ) = 0.019

P( + | covid) = .9

p(covid | positive) = (P( + | covid)\*P(covid))/P( + )

= (.9\*.02)/.019