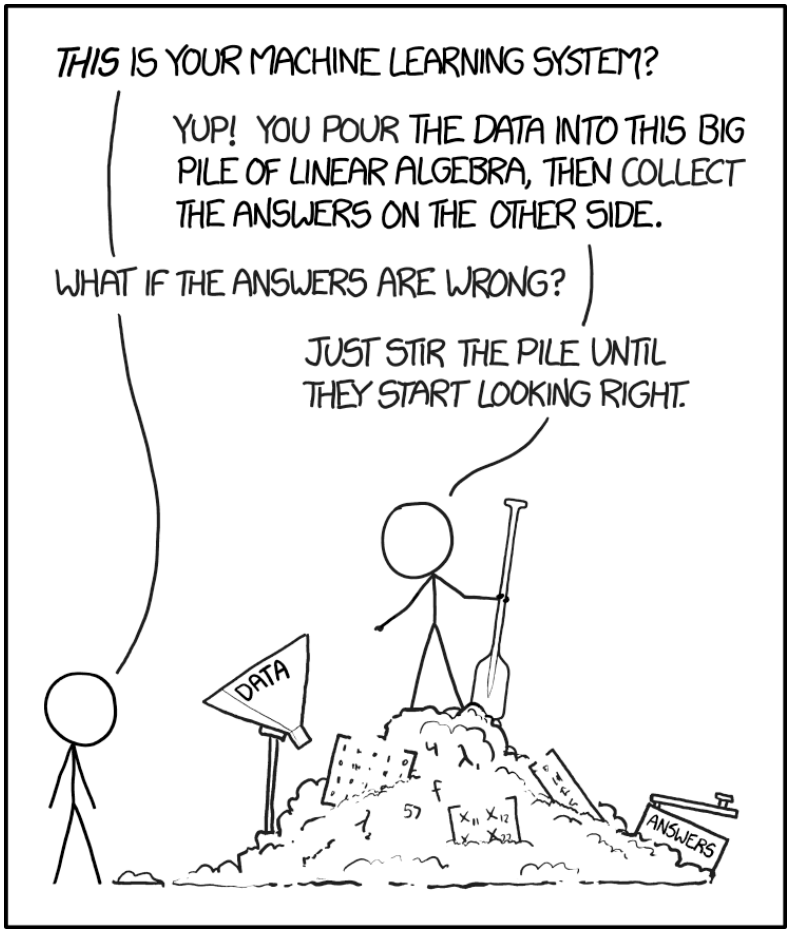
Cognitive Bias in Decision Making

Solve the following exercises without using Google – only use your reasoning. If you are employed with a company, you cannot simply google “my sales are declining, why?”. There is not going to be a Wikipedia article solving that for you.



(image from here: https://towardsdatascience.com/survey-d4f168791e57)

IMPLICIT BIAS

Complete one or more of the IAT tests here

https://implicit.harvard.edu/implicit/takeatest.html

Are you surprised?

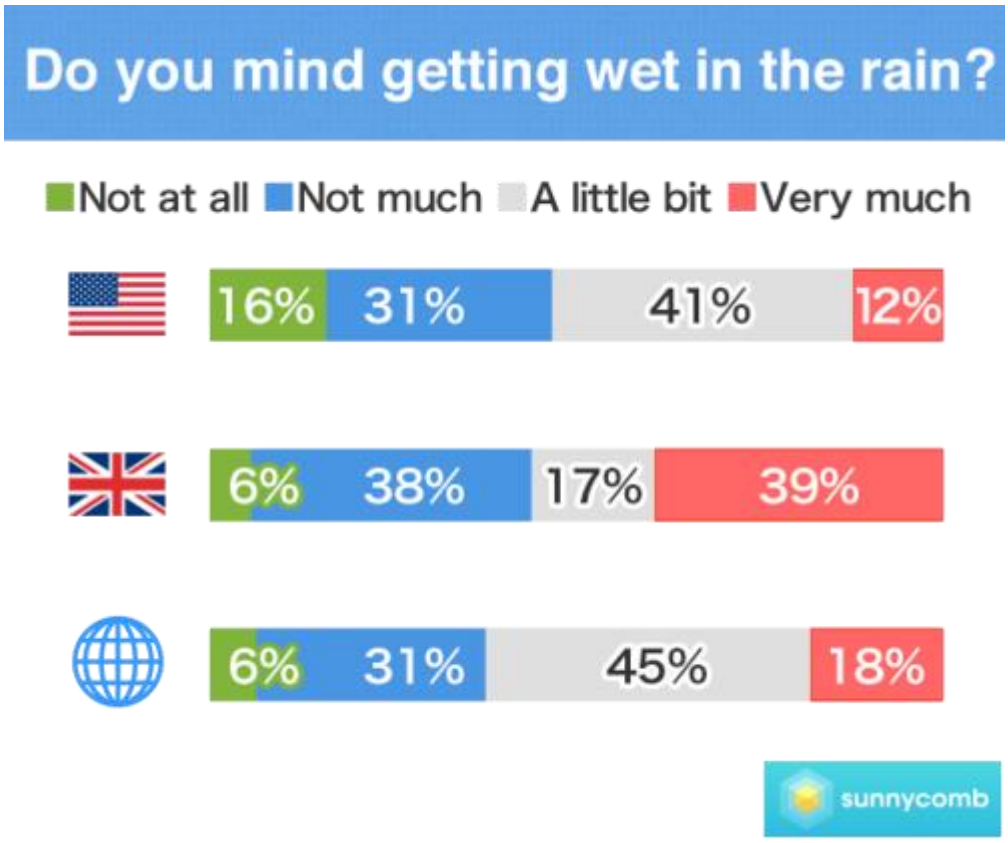
BRODIE

(image from here: https://en.wikipedia.org/wiki/Brodie_helmet)

You are an analyst with the US military during 1st world war. Due to technical advancements in production of military equipment, your solider colleagues have received a new helmet in 1917. Before that time, helmets were not worn. Almost immediately after introduction, colleagues in the MTF (military treatment facility) start complaining that more soldiers come in who needed treatment for head trauma. They are complaining that the number of soldiers needing treatment is draining their resources.

As an analyst, it is your task to come up with a strategy to suggest to the senior leadership. Considering your data points, what are you going to do?

BRITS ARE MORE EASILY ANNOYED



(image from here: https://sunnycomb.tumblr.com/post/90373669845/global-umbrella-survey-results)

You are an analyst with Umbrella INC. One of your marketing colleagues has made the above chart and is now proposing the conclusion that Brits are more annoyed about getting wet in the rain than Americans. She is arguing that the company need to come up with a new marketing strategy in the US segment, because clearly the advertisements focusing on "how annoying it is to be dripping wet in the rain" must not work since Americans tend to not care (as much) about getting wet.

Do you agree with this conclusion? Why? Why not?

What do you propose that the company do to devise a marketing strategy for umbrellas in US and UK, respectively?

DEVELOPING AN APP FOR MEDICAL RESEARCH

You are working with a small company that is a start up in the medical industry. You are the only app developer.

In order to inspect the safety of the vaccine, the medical companies need to examine the safety of approved vaccines at a greater scale. This is time and resource intensive and therefore you are developing an app that allows for parents to record temperatures of vaccines given in order to relieve nurses from the task of taking the temperature on participating children daily.

The app is supposed to work like this: young children are given a vaccine that has been approved in laboratory conditions. Their parents have been instructed to record the temperature of the child after the vaccine has been administered.

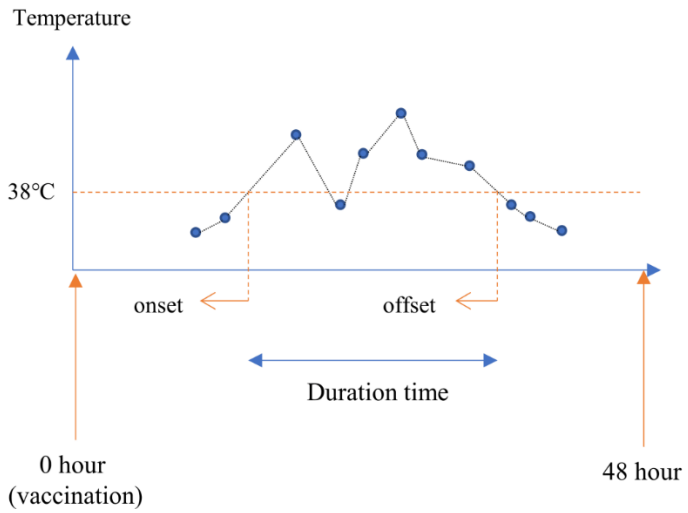
You are in the early prototyping stage of your app development and are testing the app with parents. You are testing it with vaccines that have been on the market for a very long time and thus are considered safe.

The problem is that when looking at your data from your app, you see that all the children getting the "safe" vaccines are experiencing symptoms of fever. This is contradictory to the data that the doctors you are working with have. They claim that all the vaccines currently in the vaccination program are safe and do not give fever as a symptom.

The founders are considering abandoning the development of the app since this news is bad news for the market conditions for your app and move into other areas, that do not require an app developer. You will therefore be out of a job.

You are trying to consider what the reason for this could be so that you can convince the founders to keep working on the product and keep your job. You had a class on cognitive bias and may be able to produce some insights on the situation that could lead to making the founders reconsider their reasoning.

You pull data from the app and see the following graph of average temperatures:



(image from here: https://mhealth.jmir.org/2019/4/e12223/)

What is your reasoning? What are you going to tell them?