Exercise 10

Hit songs, books, and movies are many times more successful than average, suggesting that ‘‘the best’’ alternatives are qualitatively different from ‘‘the rest’’; yet experts routinely fail to predict which products will succeed. One explanation for the observed inequality of outcomes is individuals do not make decisions independently, but rather are influenced by the behavior of others.

The goal of this exercise is to test the social influence hypothesis. We will analyze the experimental approach to the study of social influence in cultural markets proposed by Salganik et. al. where they created an artificial ‘‘music market’’ in which 14,341 participants downloaded previously unknown songs either with or without knowledge of previous participants’ choices.

After reading carefully the paper, you will answer the following questions: (i) **What is the difference between experiment 1 and experiment 2?** (ii) **What is the difference between the "worlds" described in the paper?** You also will perform 3 programming tasks. First, **you will compute the inequality of success for social influence, reproducing Figure 1.** Second, **you will compute the unpredictability of success and reproduce Figure 2**. Finally, **you will analyze the relationship between quality and success and reproduce Figure 3.**

Exercise steps:

1 - Read carefully the article and understand the experimental design.
2 - Answer the questions.
2 - Examine the dataset and identify the variables used in the analyses.
3 - Perform the analyses.

Resources:

Paper, **Supporting Information**.

Data:

https://github.com/tocunha/reflectionsdatascience/tree/master/exercise10-28-04-2020

Deliverables:

With the same groups assigned for the exam, each group will create a jupyter notebook with its analysis. Use markdown on the jupyter notebook to detail the strategy used and to communicate the findings. Submit the notebook by **05/05/2020** to get informal feedback which might be useful later for the last part of the exam. Only one submission per group.

Where to submit it: