**Data Science Case – TV allocation**

**Problem**

The marketing team has approached Mister Spex’ data science team to better understand the TV performance. The data science team has analyzed the given data and was able to allocate a certain number of visits, profit and orders to every spot. On top of that they estimated some metrics like share of new customers and gender share.

Based on this analysis the data science team wants to provide some insights. Part of this analysis is to figure out, if there are certain success drivers. These could be used as a guideline for the marketing manager to be able to book more profitable spots.

The provided data contains broadcasting times of spots in January 2020. When booking a spot the marketing manager can decide between a station and within a station between different programs and times.

**Task**

You can use your preferred coding language for the task.

1. Analyze, clean (if necessary) and understand the data
   1. There are several metrics provided by the data science team. Which metrics are the best “success metrics” in your opinion and why?
   2. Please comment your steps
   3. Explain your findings and make use of them during the next step.
2. Apply a data science method of your choice to identify the success drivers.
   1. Please comment your steps (feature selection, method choice, etc.)
3. Think of a way to present your findings to the marketing team
   1. The format is up to you. It can be a Jupyter Notebook, Powerpoint, Latex or whatever you prefer.
4. Please share your code.

**Legend**

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| Programme | The program during which the ad is broadcasted |
| Station | The station, where the program is shown. It can also be called TV-channel |
| datetime | The time and date when the ad is broadcasted |
| cost | The spending per spot |
| profit | Predicted profit provided by the data science team |
| order\_sum | Predicted orders provided by the data science team |
| male in % | Predicted percentage of males, who saw the spot (provided by the data science team) |
| New customer in % | Predicted new customers in % who saw the spot (provided by the data science team) |
| vis | Predicted visits on the Mister Spex website driven by the spot (provided by the data science team) |