Case study: Churn in Telco

# Intro

Our client, a telecommunications company, approaches us to help her understand which factors contribute to churn (that means, changing telecommunications provider, from our client to the competition) and possibly also predict which customers are most likely to churn.

# Tasks / Questions

1. How looks the distribution of tenure (number of months under a contract) of a customer?
2. Calculate the average revenue per user (ARPU), by contract type and by tenure. For the later, choose an appropriate bin, as the tenure is a “continuous” variable. Which bin would make business sense, in your experience?
3. Can you identify any pattern in the most profitable customers that churned?
4. Which variables are the main drivers of churn? You can identify these either qualitatively (using different plots) or quantitatively (machine learning or other methods you are familiar with).
5. Design and implement a predictive model for customer churn.
6. What is the takeaway message for the senior managers?

# Deliverables

1. Summarize your findings in a short presentation addressed to senior management, which may (or not) have quantitative training. You should describe your methodology and relevant findings and actions. Do not forget to clearly communicate the business outcomes of your solution.
2. Write R or Python script covering the whole predictive modelling process from data loading to exporting the scored data. It should be able to load the sample of test data (in the same format as the data attached) and output the probability of churn for each client.

# Appendices (e.g. data)

Data sample can be found in the file churn.csv. You will receive the link for downloading the file soon via email.