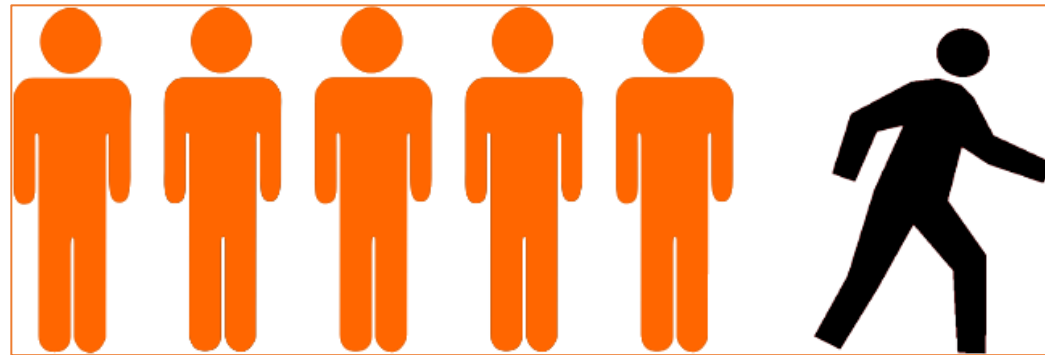# Customer Churn Prediction at Orange

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orange™

Case overview

Orange wants to estimate the risk of customers churning (i.e. leaving Orange).
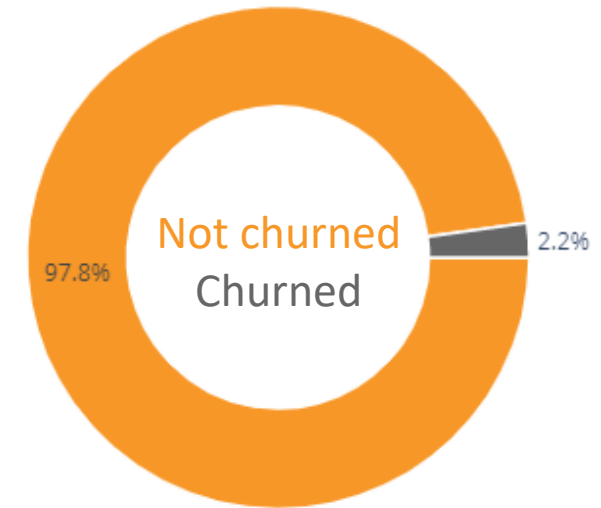
For this case, I created a prediction of which customers will churn in the next two months and what characterises them.
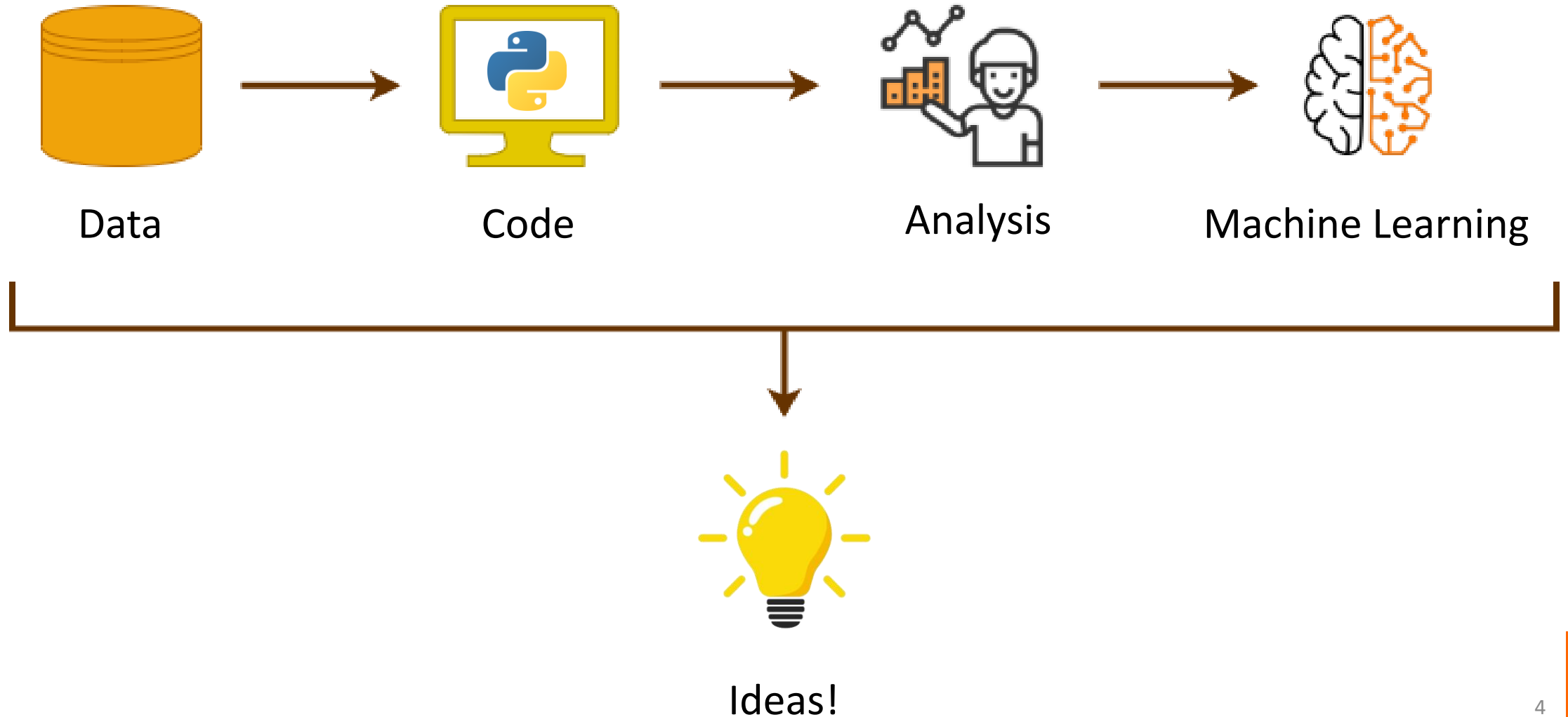
Available data

Data on 100 000 customers:

- Female (50%), Male (45%) and Unknown (4%)
- 4 customer languages
  - French (54%), Dutch (46%), English (0.3%) and German (0.1%)
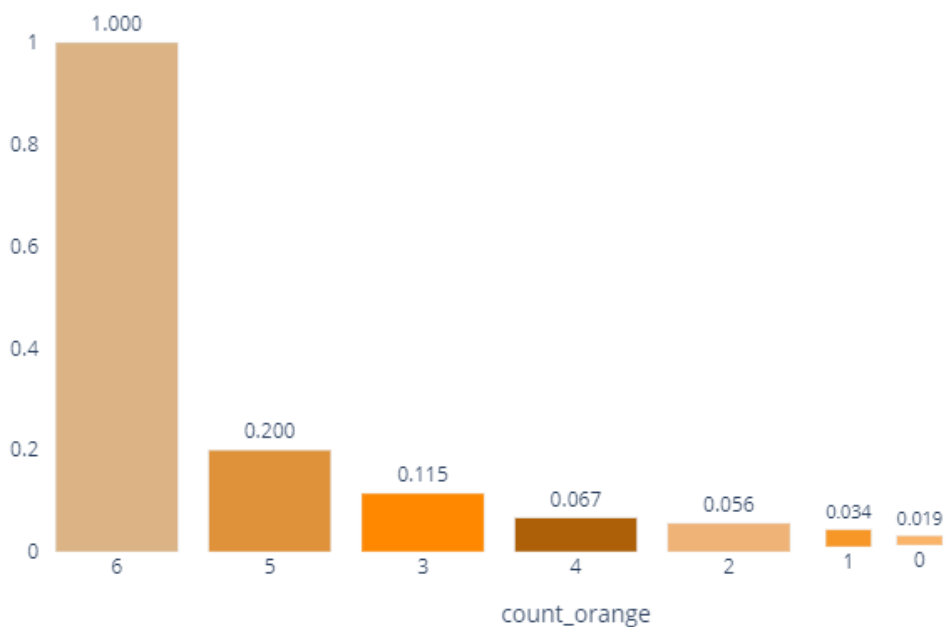- 2 markets of MASS (93%) and SOHO (7%).

97.8% Not churned
Churned 2.2%

Out of this data, 10 000 other customers were used for prediction.

Implemented approach

Data → Code → Analysis → Machine Learning

Ideas!

Results

Feature importance
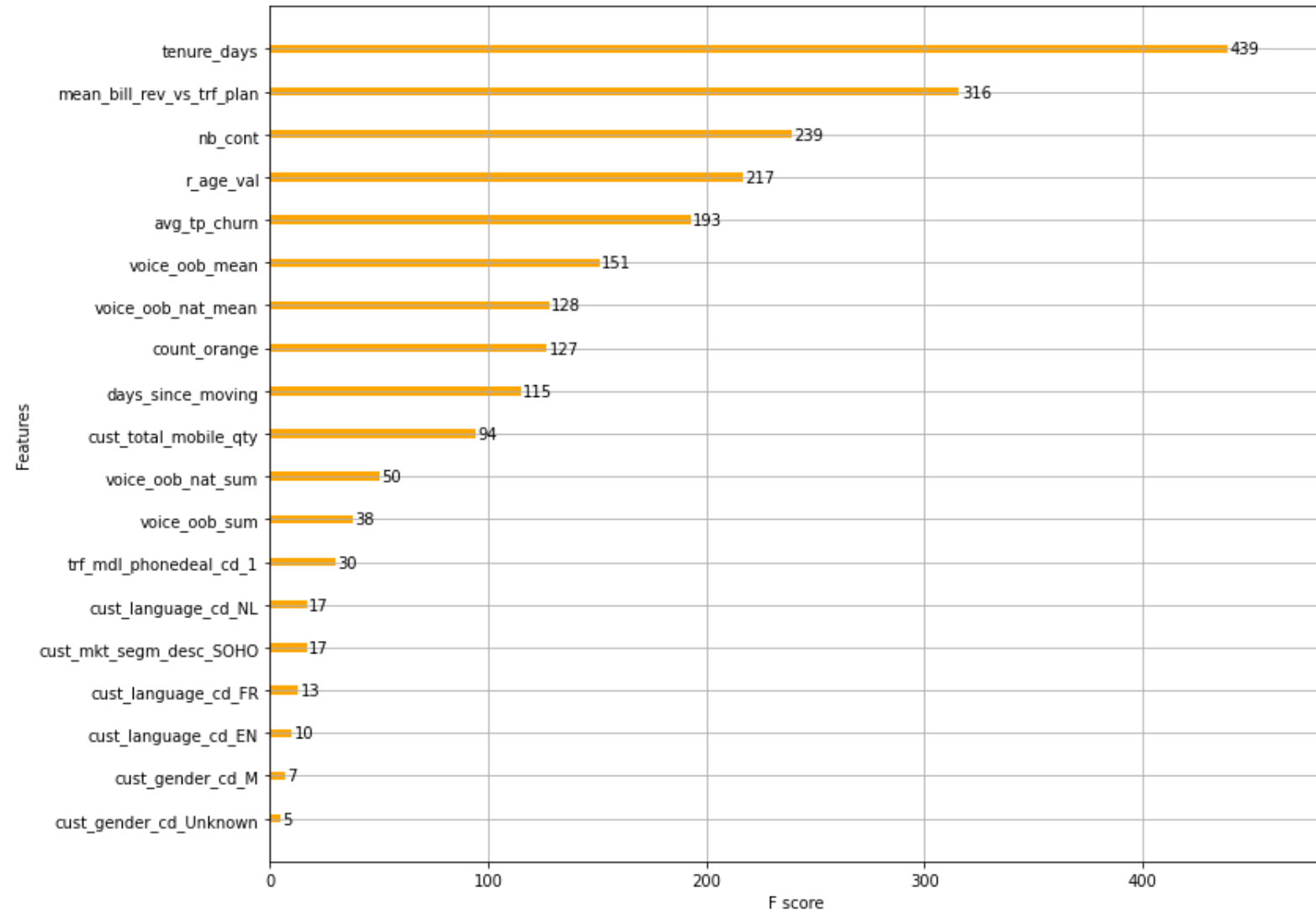

Churn rate by count_orange

Conclusions

- Overall, the churn rate is not dramatic (only 2% out of 100 000 customers)
- The machine learning algorithms were very accurate (>97%)
- Out of 10 000 customers to score, only 35 (0.3%) were predicted with a churn likelihood > 10%, out of which 3 had higher than 20%.
- *Tenure_days* are the best predictor of a customer churn
- Orange shall increase focus on customers with:
  - *count_orange* higher than 1
  - *mean_bill_rev_vs_trf_plan* close to 1
  - higher *nb_cont*
- To come up with more conclusions, the dataset needs to be extended by other features or more examples of churned customers.

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Thank You

Do you have any questions?