

Forecast case study

“We use Machine Learning and Data Science to make sport accessible to the many.”

**The general instructions are as follows:**

* Please do the exercise using Python and your favorite IDE. If you think you have better tools, we will be happy to hear.
* /!\ We recommend that you spend no more than 3-4 hours preparing your answers, as this test is mainly intended to facilitate the technical discussions in the interview that follows.

## Use case

In stores many decisions are made by managers at the department level.

In order to help store managers in making mid-term decisions driven by economic data, we want

to forecast the turnover for **the next 8 weeks** at store-department level.

**Data**

*train.parquet* & *test.parquet* files contain weekly store-department turnover data (*test.parquet* does not contain the turnover feature). For confidentiality reasons the turnover values are rescaled.

*bu\_feat.parquet* file contains some useful store information.

**Deliverable**: Explain your methodological choice and provide the associated code to solve the problem. Reminder: the final objective is to forecast the test data period (see test.parquet).

Explanations may cover the following topics :

* EDA
* Baselines
* MVP
* Evaluation methodology and metrics
* MLOps strategy