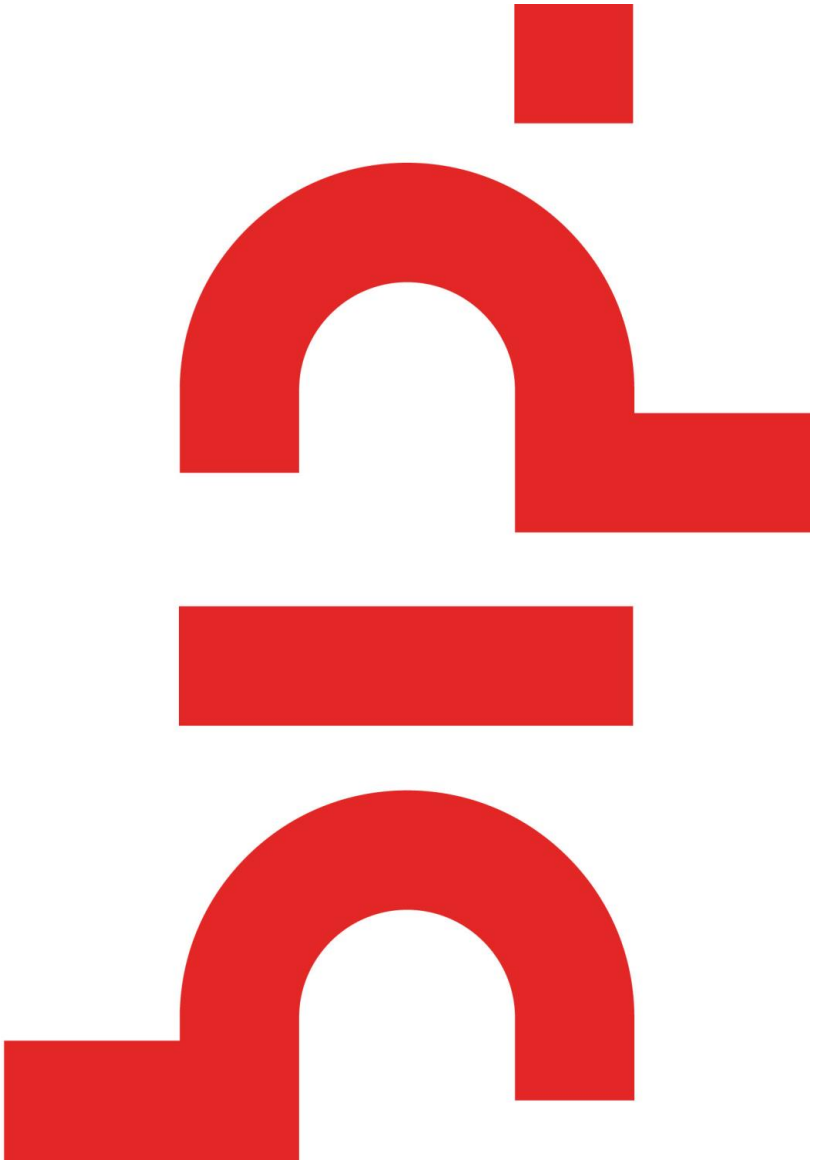
bip xTech

Course Project 2020

Rules and Dataset Explaination



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Dataset Description

This year project is based on a **sales forecasting** dataset with aggregated information for different products (SKU) throughout a 3-years time window:

- Weekly data (Dec 2016 – Dec 2019)
- Data are available for 43 SKU but the target for the prediction is restricted to 12 SKUs

Variable	Description	Type
SKU	Unique identifier for the products	*int*
Pack	Type of pack in which the product is sold	*str*
Size (GM)	Product weight	*float*
Brand	Product brand	*str*
Price	Planned price of sale for the product in week w	*float*
POS_exposed w-1	Number of stores in which the product was put on evidence at w-1	*int*
Volume_on_promo w-1	% Volume of product put on promo at w-1	*float*
Sales w-1	Sales of product at w-1 (lagged target)	*int*
Scope	Boolean that indicates SKUs in scope (target)	*bool*
Target	Sales of product in w	*int*

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Testing and Evaluation

Performances will be evaluated by means of the **MAPE (Mean Absolute Percentage Error)** metric on the test set, which is provided net of the target column.

Data are split time-wise into train and test sets with the following criterion:

- 2 years and 6 months in the **train set (Dec 2016 – July 2019)**
- 6 months in the **test set (July 2019 – Dec 2019)**

$$MAPE = \frac{1}{n}\sum_{i=1}^{n}\left|\frac{A_i - F_i}{A_i}\right|$$

A_i: $actual\ value$
F_i: $forecast\ value$

Data Available in csv format: **https://we.tl/t-2zlD8BeIrK** (archive password: *DMTMChallenge2020*)

Deadline: **Friday June 12 23:59**

We ask you to prepare and upload on Beep platform an archive containing:

- *Prediction.csv*: you can find an example in the archive
- *Report.pdf*: 4 pages to describe your approach, data processing, prediction model and analytical results
- *Presentation.pptx*: 5 slides for the final project presentation describing you approach, data processing, prediction model
- *Scripts.zip*: any notebook or script you wrote will be evaluated

If you have any doubt you can ask directly on Beep forum.

THANK YOU

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