

## Project: Sales Superstore A-to-Z-Market Exploratory Data Analysis with Python

The objective is to perform a products sales analysis from an online shop (A-to-Z-Market). The online shop needs to manage multiple products categories sales across multiple physical stores locations.

You are the data analysts' team for this online shop.

The goal of the project is to analyze sales history data and **identify key points that made the business profitable or not**. These key points should be clear enough to help designing a new sales profitability strategy for the next year by the marketing director of A-to-Z-Market.

The dataset for the analysis (sales.csv) contains the last 4-years sales data from different regional stores in United States. It contains all details for each customer order (dates, localization, products categories, shipping mode, quantity, discounts, profitability, etc.).

You can use the profit ratio as a profitability indicator in your analysis. For a single sale, the profit ratio is defined as the ratio between the amount of profit and the amount of sale. However, when aggregating sales, the profit ratio should be the ratio between the sum of profits and the sum of sales for each aggregated group.

Analyze this dataset using a python jupyter notebook and present **at least 5 key points that make this business profitable or not**. Each key point could consist of a visualization or a clear aggregated table for instance. **You can use Jupyter markdown paragraphs to clearly explain each output of your analysis.**

Each project group must have a **maximum of 3 members**.

The deadline for sending your complete python notebook file for each group is **Wednesday 30<sup>th</sup> October 2024 at midnight**. Upload your Jupyter notebook directly on the dedicated space on Campus (at the beginning of your notebook, make sure to provide the names of all the members of your group).