**Exploratory Data Analysis in Python — A Step-by-Step Process**

The process consists of several steps:

1. Importing a dataset
2. Understanding the big picture
3. Preparation
4. Understanding of variables
5. Study of the relationships between variables
6. Brainstorming

Row ID - L

Order ID - L

Order Date - L

Ship Date - L

Ship Mode - M

Customer ID - L

Customer Name - L

Segment - M

Country - H

City - H

State - H

Postal Code - M

Region - H

Product ID - L

Category - H

Sub-Category - H

Product Name - H

Sales - H

Quantity - H

Discount - H

Profit - H

dtype='object')

**Our Goal**

1. To understand which products, regions, categories and customer segments our client should target or avoid.
2. Build a model to predict Sales or Profit.

A Superstore Giant is interested in determining what would work best for them given the rising needs and fierce competition in the market. They want to know which products, regions, categories, and consumer segments they ought to concentrate on or steer clear of.

The Consumer category makes up the majority of the clientele.

The East and West regions see the majority of purchases as opposed to the South and Central.

The most popular category for purchasing is office supplies.

In terms of Product Sub-Category, Binders and Paper are in the lead.

The Standard Class Shipment option is preferred by the majority of customers.

New York City leads all cities in terms of the number of purchases made, followed by Los Angeles.

New California records the second-highest number of purchases behind New York among all the states.

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1. New York City, Los Angeles, Seattle, San Fransisco, and Detroit are the leading cities in terms of profit while Philadelphia, Houston, San Antonio, Lancaster, and Chicago make the most losses.
2. The Canon imageCLASS 2200 Advanced Copier is the product with the most sales and profit while the Eureka Disposable bags for Sanitaire Vibra Groomer I Upright Vac, Avery 5, Xerox, Grip Seal Envelopes and very Hi-Liter Pen Style Six-Color Fluorescent Set are the products with most losses, and Cubify Cubex 3Dprinter Double Head, Lexmark MX611dhe Monochrome Laser Printer, Cubify Cubex 3Dprinter Triple Head, Chromecraft Bull-Nose Wood Oval Conference tables & Bases and Bush Advantage Collection Racetrack Conference table make the most losses.
3. Philadelphia and Houston are one of the leading cities in terms of sales but they make the most losses

1. The cities with the highest profits are New York City, Los Angeles, Seattle, San Francisco, and Detroit, whereas the cities with the most losses are Philadelphia, Houston, San Antonio, Lancaster, and Chicago.

2.

The Eureka Disposable bags for Sanitaire Vibra Groomer I Upright Vac, Avery 5, Xerox, Grip Seal Envelopes, and very Hi-Liter Pen Style Six-Color Fluorescent Set are the least sold items, while the Canon imageCLASS 2200 Advanced Copier has the most sales and profits. The least profitable products include the Cubify Cubex 3Dprinter Triple Head, Cubify Cubex 3Dprinter Double Head, Lexmark MX611dhe Monochrome Laser Printer, Chromecraft Bull-Nose Wood Oval Conference Tables & Bases, and Bush Advantage Collection Racetrack Conference Table.

3. In terms of sales, Philadelphia and Houston are among the top cities, yet they suffer the most losses.

Display on each bar the value counts for the Regions.

Observation:

1. The west is leading in terms of profit, followed by the east region
2. The consumer segment brought in more sales as well as profit.
3. Copiers and phones brought in the most sales and profits.
4. Technology category brought in more profits and sales.
5. Though furniture had a lot of sales, it didn’t bring in much profit.

Observation:

1. In terms of profit, the west is in the lead, followed by the east region

2. More sales and profits were generated by the consumer segment.

3. The most lucrative products were phones and copiers.

4. The technology sector generated higher revenue and sales.

5. Despite having lots of sales, the furniture category didn't make a lot of money.