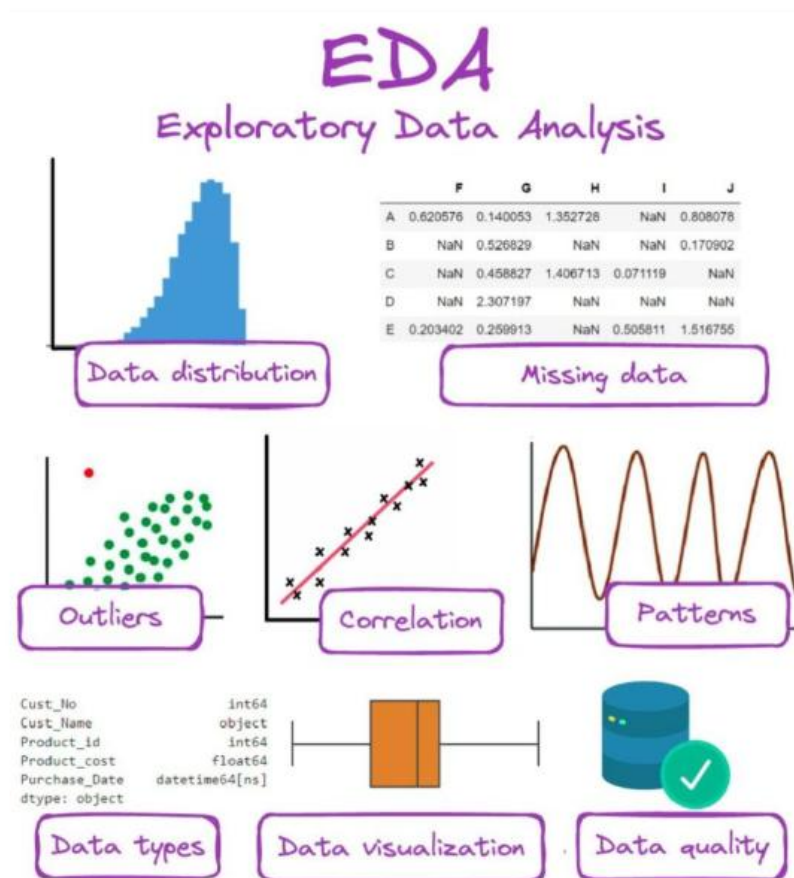


What is Exploratory Data Analysis?



Imagine you've just received a big box filled with all sorts of information - maybe it's about how people use a new app, or details about different kinds of fruits and their prices, or even information about student performance in different subjects.

Exploratory Data Analysis (EDA) is like carefully opening that box and rummaging through its contents to understand what's inside.

Instead of just counting how many items are in the box, you'd do things like:

- **Get a general idea:** You'd look at the different types of information you have. Are they numbers? Words? Dates?
- **Look for patterns:** You might notice that people who use the app a lot tend to be younger, or that certain fruits are always more expensive than others.

- **Spot anything unusual:** You might find a piece of information that looks completely out of place, like a very high price for a common fruit - maybe it's a mistake!
- **See how things relate:** You might try to see if there's a connection between how much time students spend studying and their grades.
- **Get a feel for the "shape" of the information:** Are most people using the app a moderate amount, or are there a few heavy users and many light users? Are most fruits priced similarly, or is there a big range?

Think of it as being a detective with your information. You're not trying to solve a big mystery right away. Instead, you're just looking at the clues, getting familiar with them, and trying to see if any interesting stories or potential problems jump out.

Why do we do this?

- **To understand what the information is telling us in a simple way.**
- **To find mistakes or odd things that might mess up our later analysis.**
- **To get ideas about what questions we can ask and how we can analyze the information more deeply later on.**

So, instead of jumping straight to complicated calculations or predictions, EDA is taking the time to explore and understand the basics of the information first. It helps us make sure we're asking the right questions and using the right tools later on.