

Introduction to data analysis

DATA ANALYSIS IN EXCEL



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What to expect

- This is a beginner course with more intermediate topics
 - Advanced *PivotTable* functionality
 - Complex logical functions
 - Scenario analysis and forecasting
- Prerequisites
 - Introduction to Excel
 - Data Preparation in Excel

That's Bananas!

- Act as consultants for fictional SaaS start-up: Bananas
 - Software as a Service (SaaS)
 - Analyze their sales data to find trends and forecast
- Explore `Bananas Sales.xlsx`
 - July 2019 - June 2021
 - Organized by `Customer ID` and `Sales Month`



Where be the data, matey?

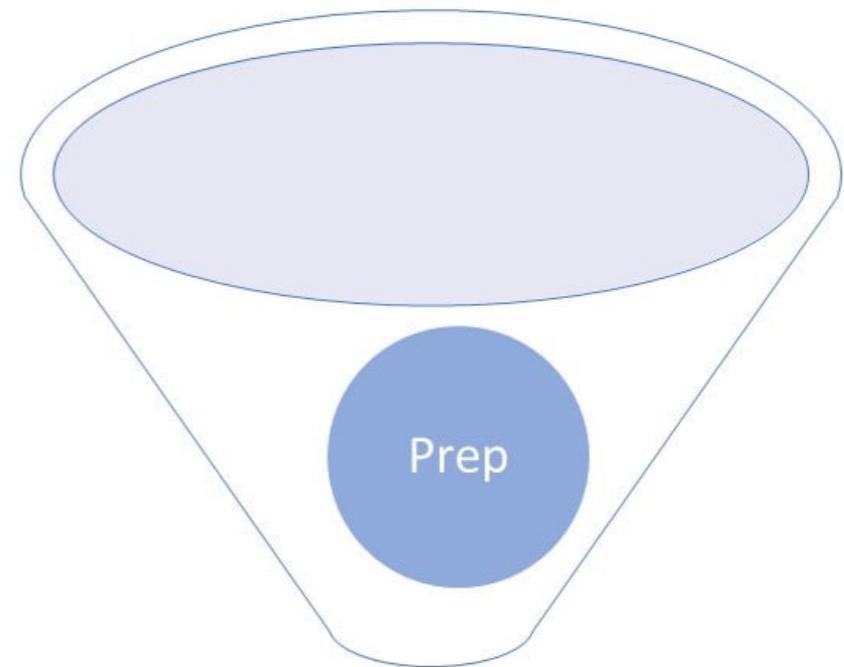


- **Exploratory data analysis (EDA)** is the process of understanding the dataset.
 - Learn the structure of the data
 - Uncover patterns or errors
 - Find relationships and insights
 - Crucial first step in good analysis

Performing exploratory data analysis

1. Data preparation

- Collecting
- Cleaning



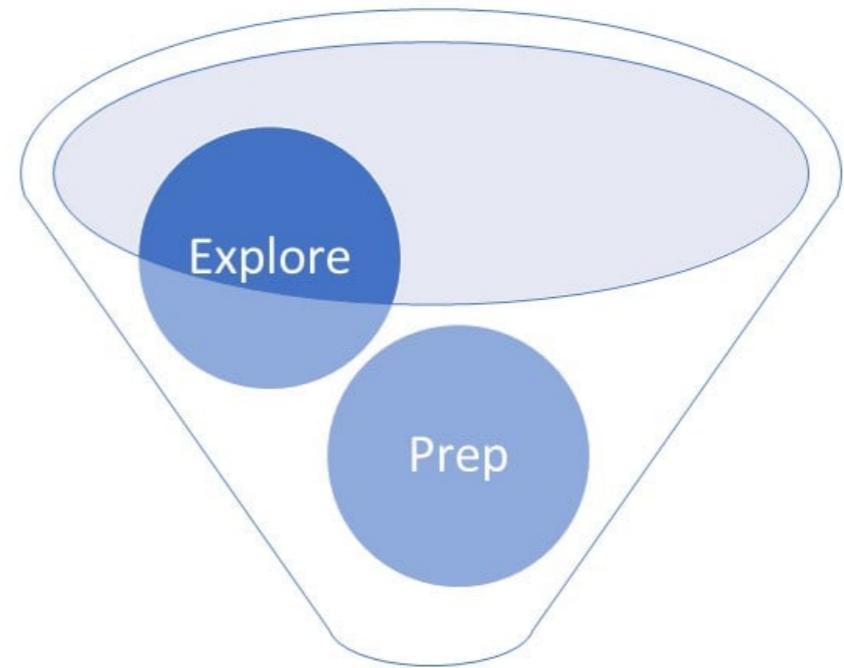
Performing exploratory data analysis

1. Data preparation

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2. Data exploration

- Learn about each variable
- Compute **summary statistics**
- Find correlations and trends
- Visualize the data



Performing exploratory data analysis

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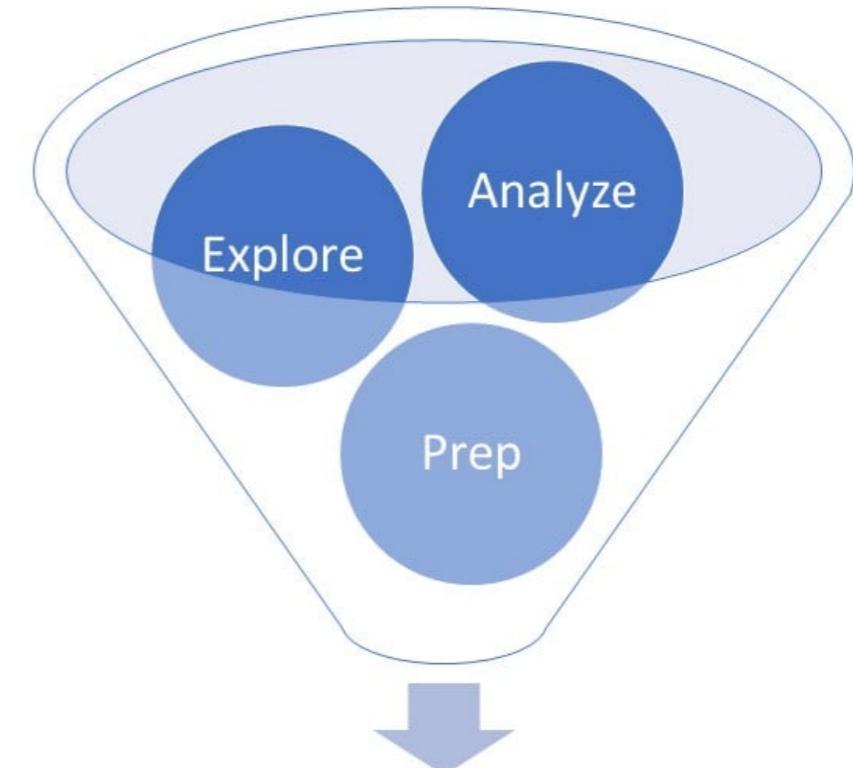
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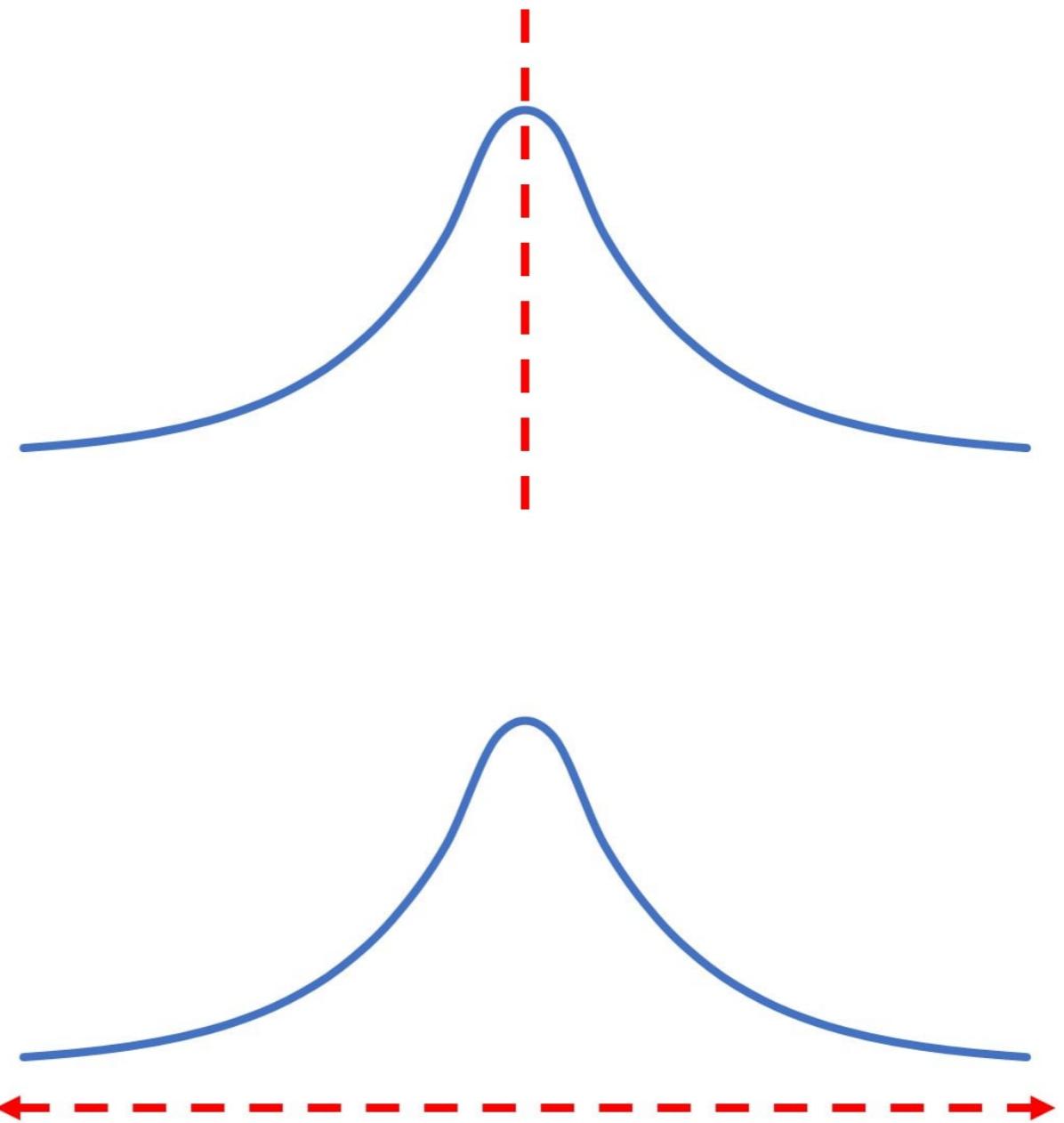
3. Hypothesis generation and further analysis

- i.e. "Sales should increase over time."



Summary statistics

- **Measures of central tendency** find the center of the dataset
 - **Mean:** the average value
 - **Median:** the middle value
 - **Mode:** the most common value
- **Range:** difference between the max and min



Let's practice!

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Exploratory data analysis in PivotTables

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