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 startup: 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



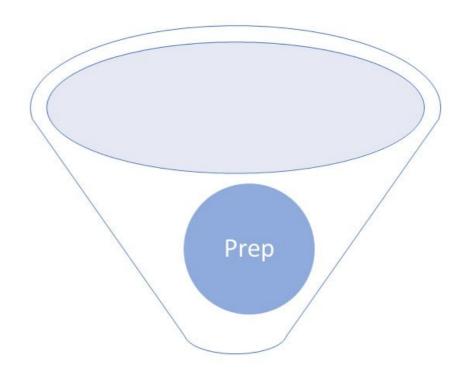
Where be the data, matey?



- 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



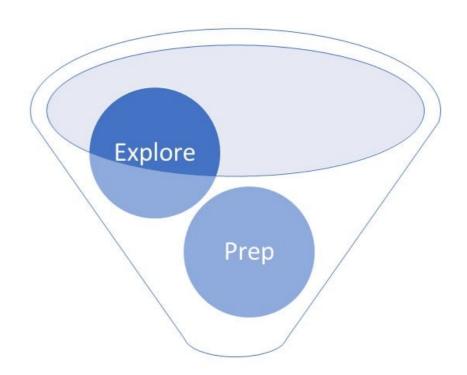
Performing exploratory data analysis

1. Data preparation

- Collecting
- Cleaning

2. Data exploration

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



Performing exploratory data analysis

1. Data preparation

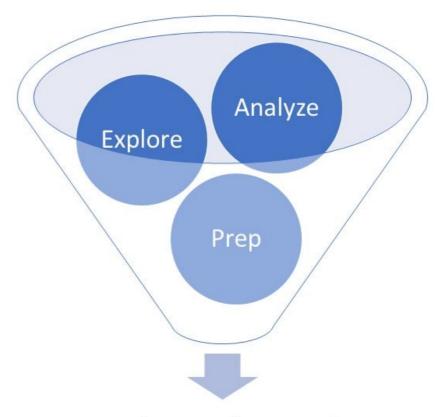
- Collecting
- Cleaning

2. Data exploration

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

3. Hypothesis generation and further analysis

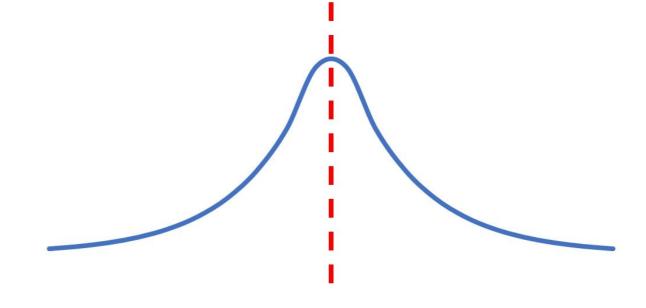
• i.e. "Sales should increase over time."

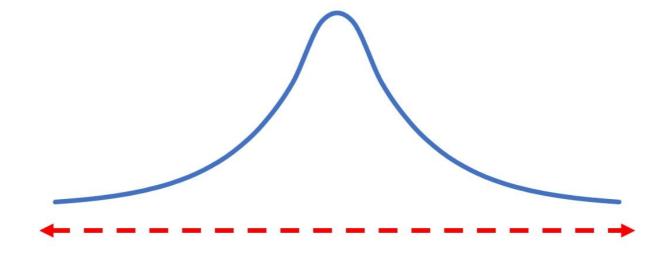


Results and Learning

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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