Inventory Analysis with Power BI

CASE STUDY: INVENTORY ANALYSIS IN POWER BI

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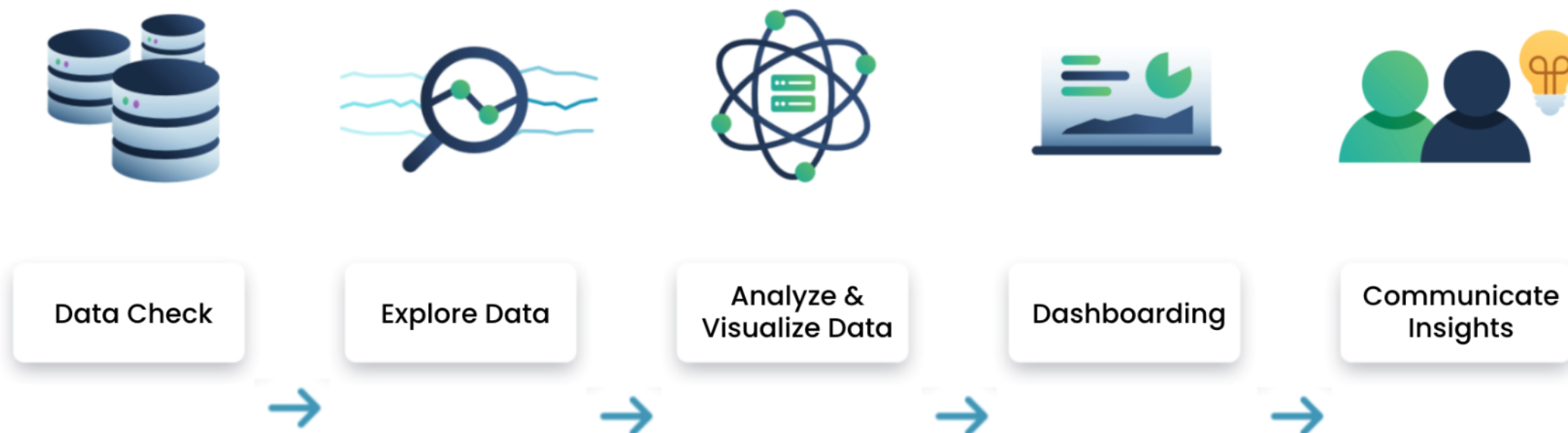Statistician and Data Scientist

datacamp

What is a case study?

- Examination of a particular real-world problem

- Practice your skills

- No new Power BI concepts

Prerequisite courses

- Introduction to Power BI

- Data Preparation in Power BI

- DAX Functions in Power BI

Steps of the analysis

| Data Check | Explore Data | Analyze & Visualize Data | Dashboarding | Communicate Insights |

1) Verify the necessary data is present and clean

2) Explore the data

3) Analyze and visualize information

4) Create dashboards and report insights

The problem

Help a management team make the best decisions.

- **WarmeHands Inc.**

- Objective: to communicate insights for the renewal of items

What is an inventory analysis?

- Optimizing the management of inventory

- Some benefits of inventory analysis:
  - Reduction of storage expenses

  - Reduction of purchase costs

  - Reduction of unused goods

  - Helps to increase profit

Starting with the inventory analysis

Some important calculations:

- Revenue

- Cost of Goods Sold (COGS)

- Profit

Calculating revenue

Revenue is the money generated from normal business operations, calculated as the sales price times the number of units sold

$$Revenue = quantity\ of\ units\ sold\ \ x\ \ selling\ price$$

[1] https://www.investopedia.com/terms/r/revenue.asp

Cost of goods sold

Cost of producing or acquiring products that a company sells, including:

- Raw materials

- Labor

- Factory overhead or costs related to production facilities

Example

$$E.g.\ Wooden\ chair\ COGS = wood + glue + wood\ finishers + labor$$

Exploring gross profit

Profit a company makes after deducting the costs associated with making and selling its products

Simplified formula

$$Gross\ Profit = Revenue - COGS$$

[1] https://www.investopedia.com/terms/g/grossprofit.asp

Dataset

Six tables with information on item description, initial stock, orders, dates, countries, and prices.

Stock		Orders		Customer		Country		Price		Costs		Categories	
SKU-ID		InvoiceNo		CustomerID		InvoiceNo		ID		SKU		ID	
Description		SKU		InvoiceDate		Country		Retail_Price		raw_material		category	
2020_units_sold		InvoiceDate								factory_labor			
2021_start_stock		Quantity								factory_equipment_rent			
		Country								distribution			
										advertisement			

Let's practice!

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