

Analyzing ecommerce data

CASE STUDY: ECOMMERCE ANALYSIS IN POWER BI



Iason Prassides

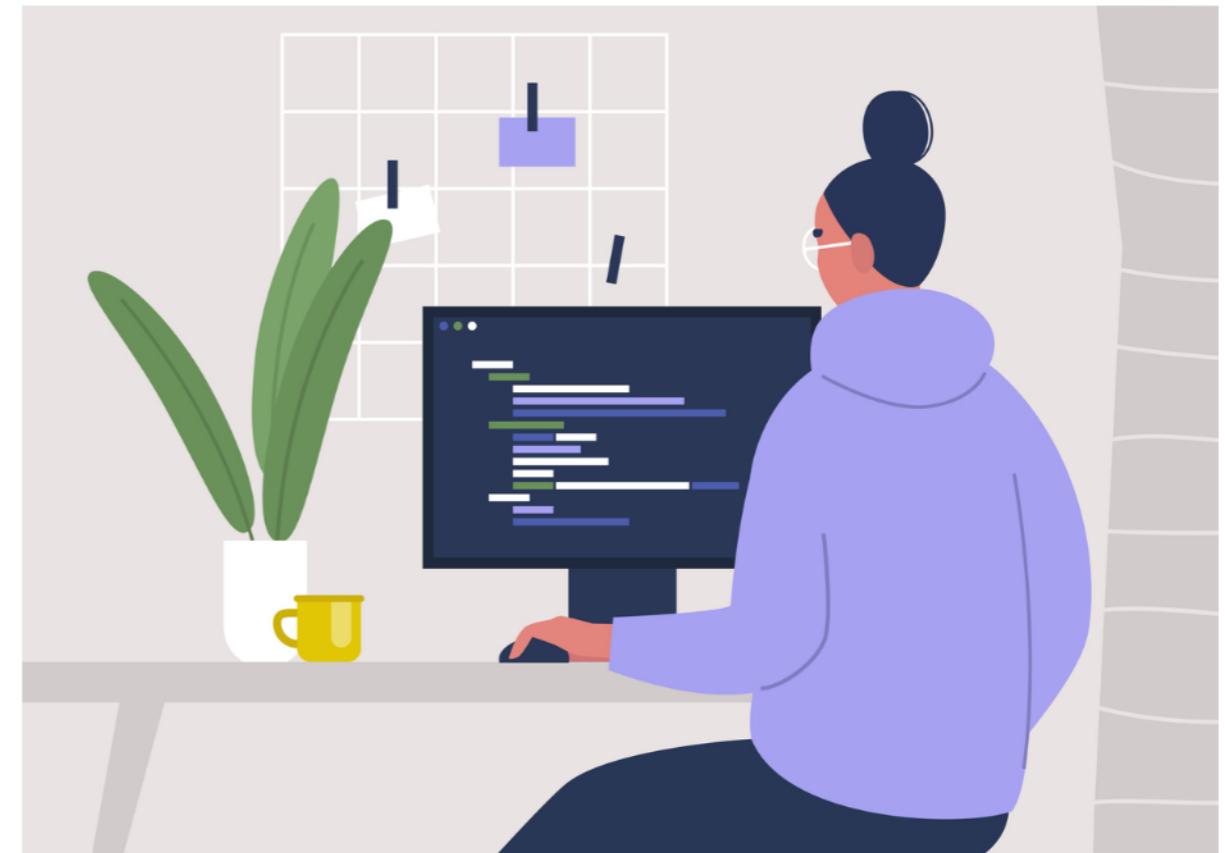
Content Developer, DataCamp

What is a case study?

- Apply your skills
- No new concepts
- Solve a real-world problem

Prerequisite courses:

- DAX Functions in Power BI
- Data Visualization in Power BI



Case study goals

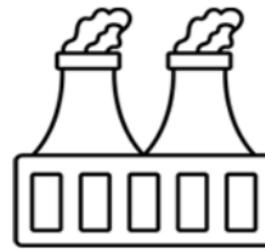
- Fictitious data from online pet supply store
 - Whiskique
- Hired as a new analyst to provide insights
- Analyze an ecommerce dataset
- Leverage Power BI to create an engaging dashboard-style pages



Ecommerce operations and terminologies



Illustrative total costs for canned pet food through various stages in the supply chain.



Factory



Freight



Warehouse



Shipping



Profit/loss



Price

$$\$4 + \$1.5 + \$1.5 + \$5 + 8 = \$20$$

\$4
COGS
(cost of goods sold)

+\$1.5
Landed Cost (freight)

+\$1.5
Fulfillment Fees

+\$5
Shipping Cost

+ 8
Profit (Loss)

= \$20
Retail Price

Whiskique's business goals

Primary Business Goals

- Serve as many customers as possible and increase sales
- Reduce operating costs



Increase sales

- Cross-sell - promote a relevant product at the point of purchase
- Upsell - promote a higher priced alternative or a higher quantity of a product



Shipping cost reduction strategies



- Shipment consolidation
- Package dimensions or weight
- Ship higher quantity

Market basket analysis

- Find products frequently bought together
- Determine correlation coefficient between purchased items
 - Implemented as a correlation matrix
- Out of scope for this course
- Can identify frequency products are purchased with together



The data source

Sales table	
Transaction Date	Date of purchase
Customer ID	Customer identifier
Description	Product description
Stock Code	Product code
	An invoice contains multiple products and represents a single checkout
Invoice No	
Quantity	Quantity of a product purchased
Sales	Total amount of a product in a single checkout
Unit Price	Unit price of a product

State mapping	
Order State	State code, description and all its variations
State	a standarized state code
Region	region name

Product table	
Stock Code	Product code
Weight	Weight of a single unit
Landed Cost	Manufacturer cost + freight
Shipping_Cost_1000	Average cost of shipping 1000 miles to customers
Description	Most recent product description
Category	Product category

Customer table	
Customer ID	Customer unique identifier
Order City	City
Order Postal	Postal code
Order State	State
Latitude	Latitude of customer location
Longitude	Longitude of customer location

Let's practice!

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