E-Commerce Analysis

International Expansion

-Anthony Dillon
-Govarthini G S

Project Overview

About the Dataset: The E-commerce analysis dataset captures all transactions for a UK-based, non-store online retailer from December 1, 2009, to December 9, 2011. Specializing in unique, all-occasion giftware, with many of its customers being wholesalers throughout Europe.

Data source: *UCI ML Repository*

Business Problem: The company wants to increase the sales in the targeted region (USA and Australia)

Hypotheses: Considering the cultural similarities between the UK, USA, and Australia, we are confident that the top-performing products in the UK will also succeed in these target markets

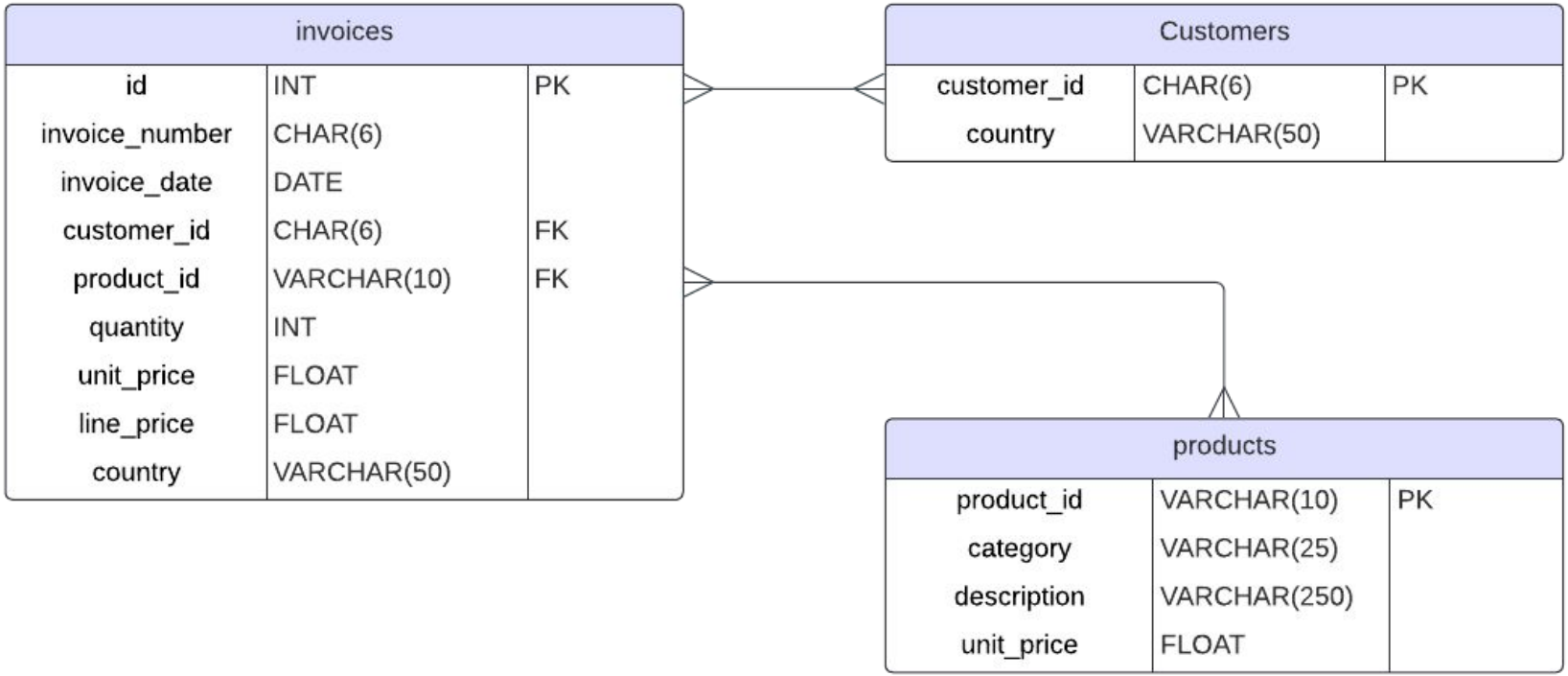
Data Acquisition, Enrichment, and Examination

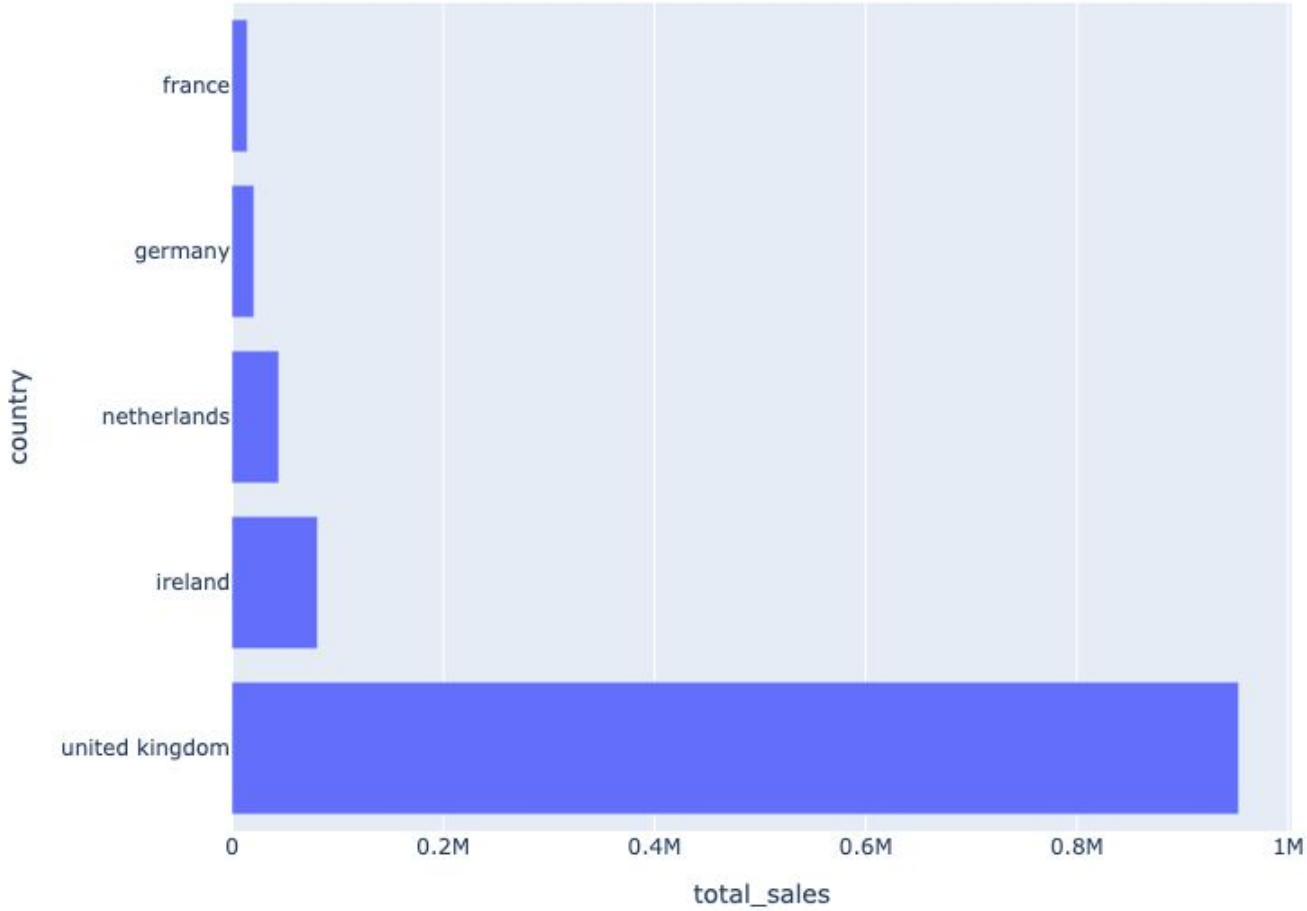
- **Row cleaning -** Used drop();
- **Renaming column -** Used rename();
- **Added new column -** df["line_price"] **=** df**.**quantity * df**.**unit_price
- **Data formatting -** Remove whitespace, change strings to lowercase and insert "_" in place of " " in column names
  df **=** trim_and_lower(df)

Major Obstacles

We haven't faced significant obstacles; however, categorizing thousands of products proved to be a challenging one.

Database Design & Data Transformation




country
france
germany
netherlands
ireland
united kingdom
0
0.2M
0.4M
0.6M
0.8M
1M
total_sales

Which product categories are the most successful in the United Kingdom?

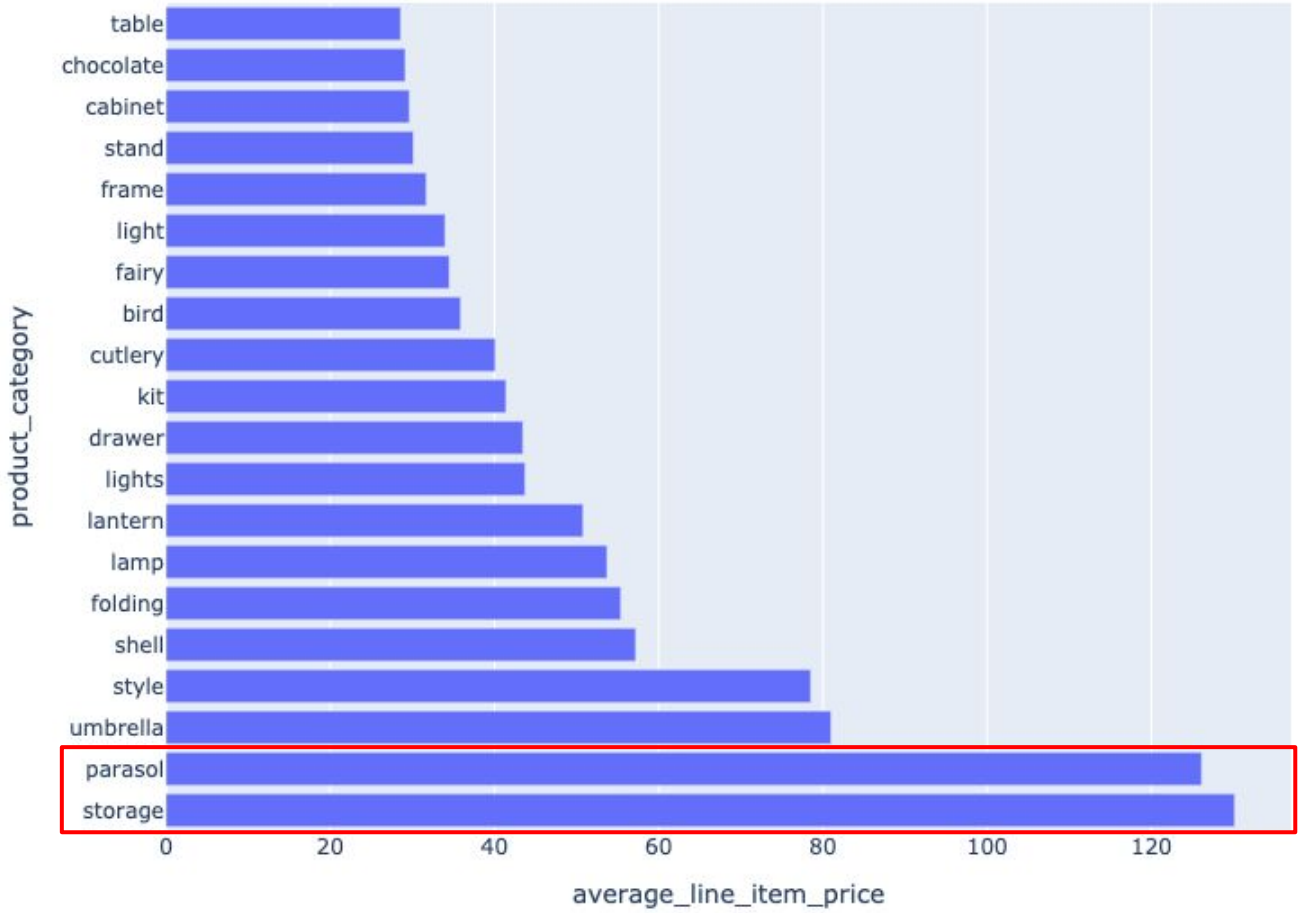
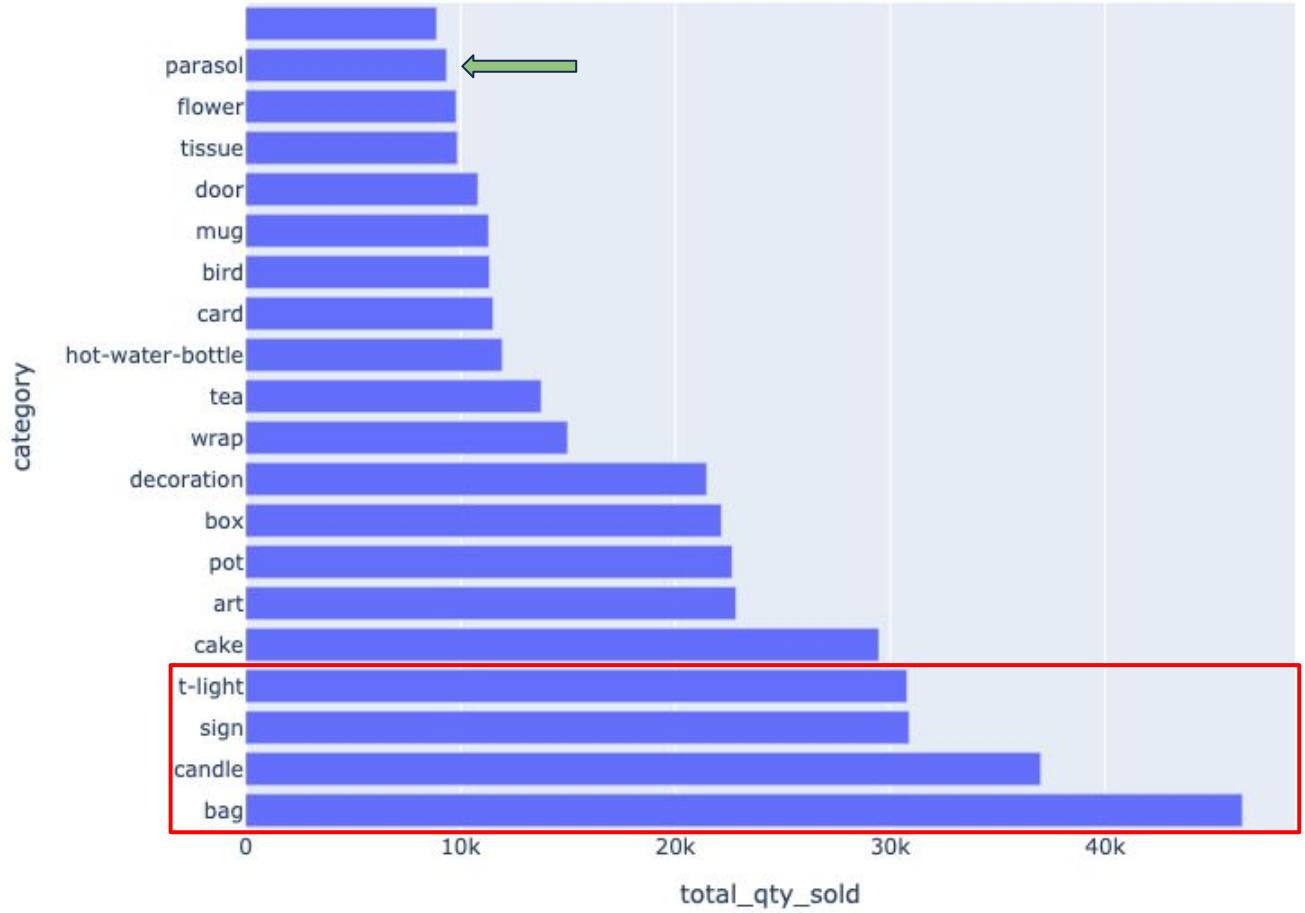
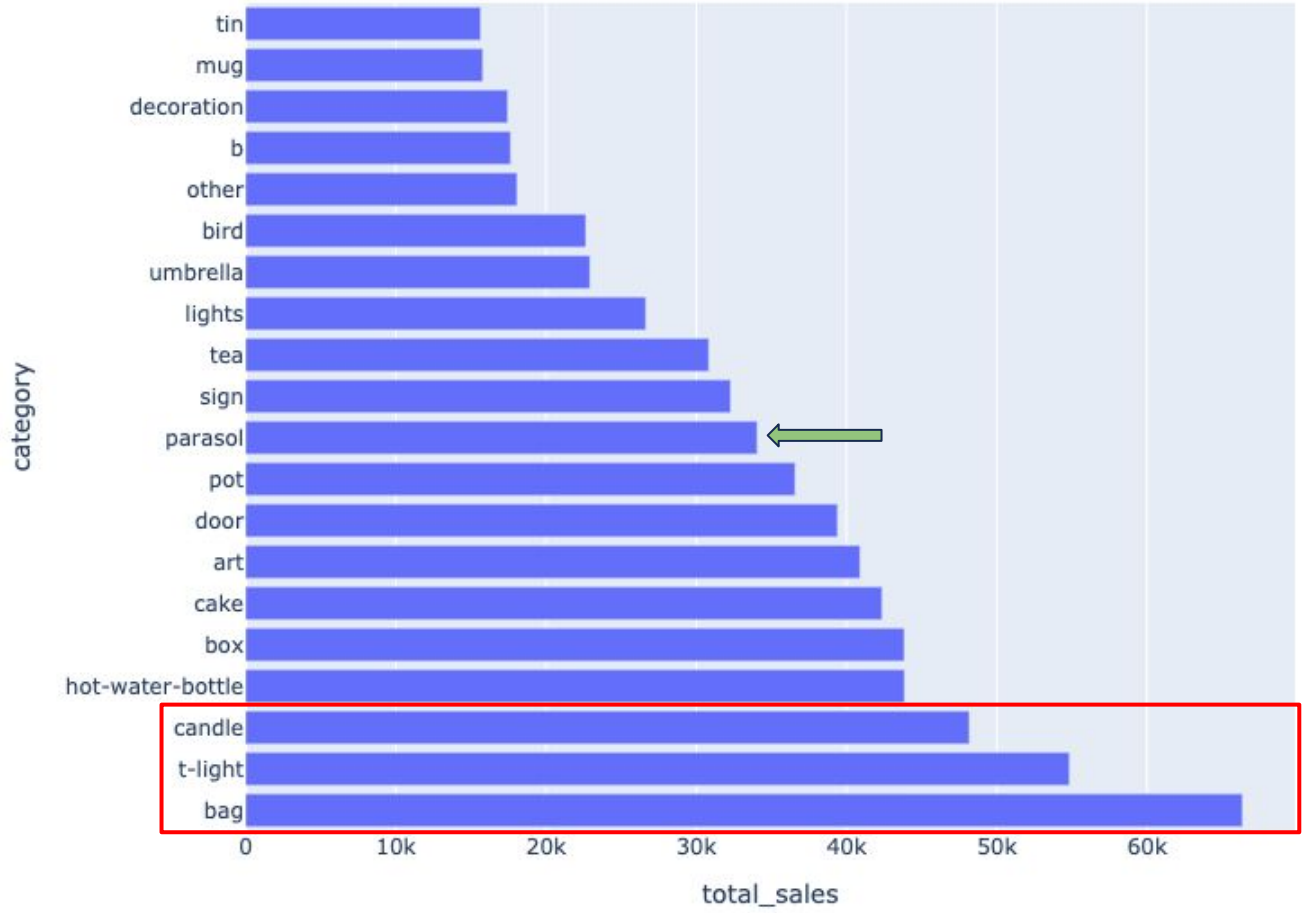


table
chocolate
cabinet
stand
frame
light
fairy
bird
cutlery
kit
drawer
lights
lantern
lamp
folding
shell
style
umbrella
parasol
storage
product_category
0
20
40
60
80
100
120
average_line_item_price


parasol
flower
tissue
door
mug
bird
card
hot-water-bottle
tea
wrap
decoration
box
pot
art
cake
t-light
sign
candle
bag
category
0
10k
20k
30k
40k
total_qty_sold


tin
mug
decoration
b
other
bird
umbrella
lights
tea
sign
parasol
pot
door
art
cake
box
hot-water-bottle
candle
t-light
bag
category
0
10k
20k
30k
40k
50k
60k
total_sales

Conclusions & Business Implications

- We conducted a comprehensive analysis of sales data from the UK market, identifying top-performing product categories.
- The success of product categories in the UK market will be used to forecast the potential in similar markets, such as USA and Australia .
- The insights gained from this analysis will guide how we allocate marketing budget per product category.
- This can guide our international expansion strategies, ensuring a higher likelihood of success in new markets.

Thank you for your time guys!!

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