

Supermarket Data Analysis & Machine Learning

IYKRA - Data Fellowship 6 || Gempar

Agenda

Background

Data Understanding

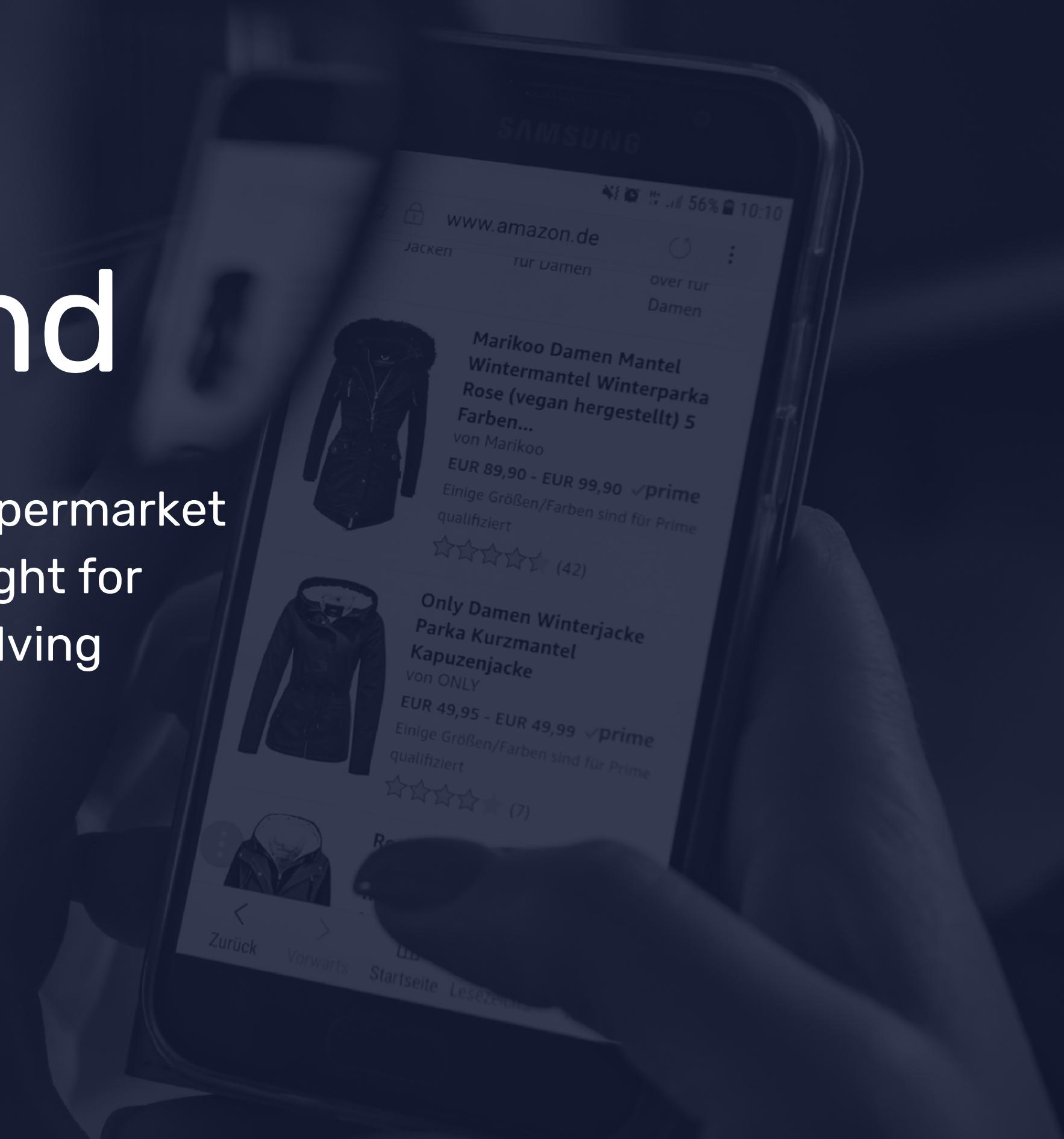
Objectives

- Data Preprocessing
- Modelling

Conclusion

Background

Analysis and clustering the supermarket data from our store to get insight for increase sales and problem solving



A woman with long dark hair and glasses, wearing a light-colored cable-knit sweater, is sitting at a desk. She is looking down at her smartphone, which she is holding in her right hand. Her left hand is resting on the keyboard of a silver laptop. A white paper cup sits on the desk next to the laptop. The background is slightly blurred, showing what appears to be a window or a doorway.

Data Understanding

Column

CONSIST OF :

- Kode_Bayar
- Kode_Barang
- Barang
- Jumlah
- Tanggal_Transaksi
- Harga_Satuan
- Kode_Pelanggan
- Negara

Data Entries

541909 DATA

Data Types

FLOAT64(3), OBJECT(5)

Background

We're delivering even more precise and real-time shopping options.

Dedicated shopping partners.

Customers will be assigned their personal shoppers.

Video stream of shopping experience.

They can watch their dedicated shoppers and communicate in real time.

Real-time delivery tracking.

They can see real-time delivery progress with GPS tracking.

Objectives

The questions that we need to solve to get insights

Most purchased item

Sales Strategy based on country

Customer Segmentation

Insight

Data Pre-Processing

Before to reach the insight, we have to process the data

Null Data

There are around **26%** (138727 rows) of data has a **problem** that we should **processing** until we can do further step.

Missing Value

We **drop** the missing value **except** from **Kode_Pelanggan**. We replace it with **NaN**, because the most missing value in **Kode_Pelanggan** which doesn't really **affect** to model.

Set Datetime

For better modelling process, we change data type **Tanggal_Transaksi** to datetime data type.

Objectives 1

Most Purchased Item



WORLD WAR 2 GLIDERS ASSTD DESIGNS
53.847 times purchased

Item we should ignore

There are data is not correlated to the data

Drop Anomaly Data

For better modelling process, we drop anomaly data such as **zero price** items, but we **keep** the minus data for discuss further with sales team

Drop Anomaly Items

We also drop items such as **Sample** and **Manual** item also **Discount** product which mean not necessary for sales forecast

Objectives 2

Sales Strategy (Based on Country)



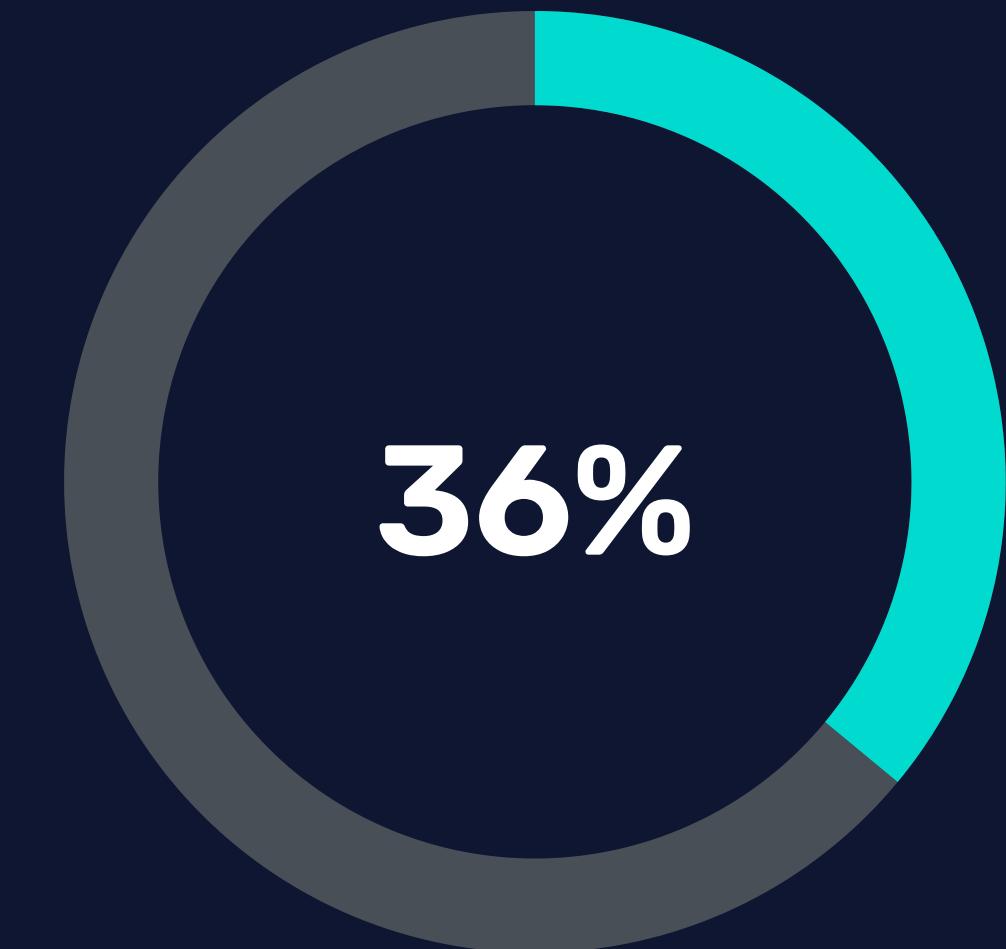
Objective 2



Boosting marketing to country which the lowest sales value



Boosting advertising to least sales item
ex : PINK KNITTED EGG COSY in Finland

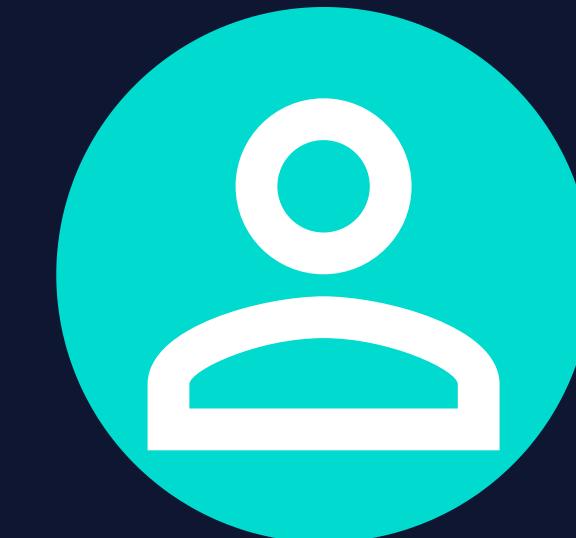


Boosting market area from the best seller item we have to another countries

Objectives 3

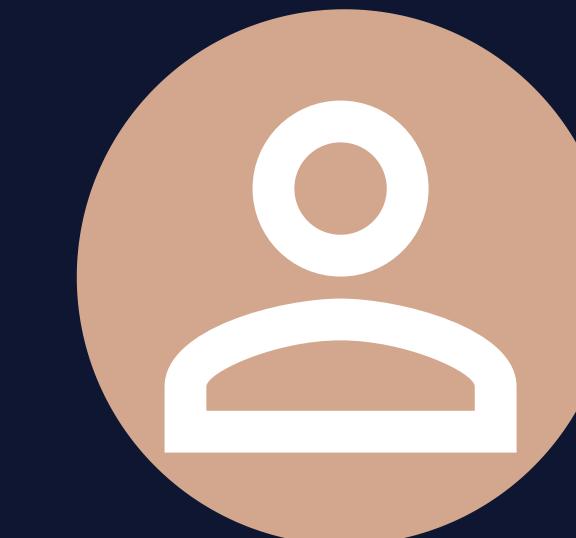
Customer Segmentation

By result from KMeans Clustering,
the best segmentation divide on 3
clusters



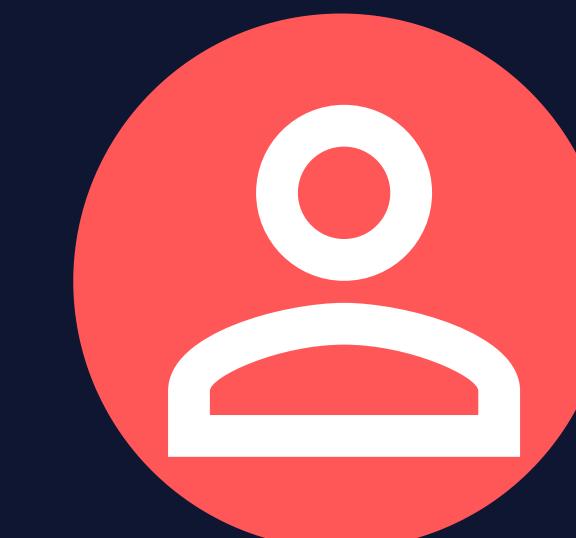
Segmentation A

Customers which prefer low priced items



Segmentation B

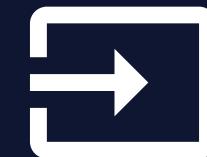
Customers which prefer medium priced items



Segmentation C

Customers which prefer high priced items

Objectives 4



Anomaly minus data

There is a lot of minus transaction data, we need to clear to declare this anomaly



Too many wrong input data

There are one anomaly input such as discount with value -\$1867 and in other transaction any manual with value same as discount.



Open the new storage or new store

To make an efficient amazon fee (\$ 221,520.5) and Postage fee, we need to open new storage or/and new store in UK or another prospect country.



Best decision discount

We see the sales team give a big discount to Ireland customer who the most buyer product in our store from his/her country. Good job, Sales Team!

A black and white photograph of a woman with short, wavy hair, smiling and looking down at her smartphone which she is holding in her right hand. She is wearing a dark-colored, long-sleeved top and a necklace with large, round beads. The background is plain and light-colored.

Thank you

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