

Retail Store Sales Dataset Documentation

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Team

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1. Introduction

This document provides a short documentation of the dataset used for the project. The dataset was obtained from Kaggle:

Source: *Retail Store Sales (Dirty) – For Data Cleaning* URL: <https://www.kaggle.com/datasets/ahmedmohamed2003/retail-store-sales-dirty-for-data-cleaning/data>

The goal of this documentation is to summarize the dataset, describe its variables and types, and provide a reproducible R script used to load the data.

2. Dataset Description

The dataset contains transactional retail sales data including product category, pricing, customer information, and purchase behavior. It is intended for data cleaning and preprocessing tasks.

```
# required packages
```

```
library(readr)
```

```
library(dplyr)
```

```
data <- read_csv("retail_store_sales.csv")
```

```
## Rows: 12575 Columns: 11
```

```
## -- Column specification -----
```

```
## Delimiter: ","
```

```
## chr  (6): Transaction ID, Customer ID, Category, Item, Payment Method, Location
```

```
## dbl  (3): Price Per Unit, Quantity, Total Spent
```

```
## lgl  (1): Discount Applied
```

```
## date (1): Transaction Date
```

```
##
```

```
## i Use 'spec()' to retrieve the full column specification for this data.
```

```
## i Specify the column types or set 'show_col_types = FALSE' to quiet this message.
```

3. Summary of the Dataset

3.1 Number of Rows and Columns

```
dim(data)
```

```
## [1] 12575    11
```

3.2 Summary of Variables

```
summary(data)
```

```
## Transaction ID      Customer ID      Category      Item
## Length:12575      Length:12575      Length:12575      Length:12575
## Class :character    Class :character    Class :character    Class :character
## Mode  :character    Mode  :character    Mode  :character    Mode  :character
##
##
##
## Price Per Unit      Quantity      Total Spent      Payment Method
## Min.   : 5.00      Min.   : 1.000      Min.   : 5.0      Length:12575
## 1st Qu.:14.00      1st Qu.: 3.000      1st Qu.: 51.0      Class :character
## Median :23.00      Median : 6.000      Median :108.5      Mode  :character
## Mean   :23.37      Mean   : 5.536      Mean   :129.7
## 3rd Qu.:33.50      3rd Qu.: 8.000      3rd Qu.:192.0
## Max.   :41.00      Max.   :10.000      Max.   :410.0
## NA's   :609      NA's   :604      NA's   :604
## Location      Transaction Date      Discount Applied
## Length:12575      Min.   :2022-01-01      Mode :logical
## Class :character    1st Qu.:2022-09-30      FALSE:4157
## Mode  :character    Median :2023-07-13      TRUE :4219
##                      Mean   :2023-07-12      NA's :4199
##                      3rd Qu.:2024-04-24
##                      Max.   :2025-01-18
##
```

3.3 Data Types of Each Variable

```
glimpse(data)
```

```
## Rows: 12,575
## Columns: 11
## $ 'Transaction ID'   <chr> "TXN_6867343", "TXN_3731986", "TXN_9303719", "TXN_9~
## $ 'Customer ID'     <chr> "CUST_09", "CUST_22", "CUST_02", "CUST_06", "CUST_0~
## $ Category          <chr> "Patisserie", "Milk Products", "Butchers", "Beverag~
## $ Item              <chr> "Item_10_PAT", "Item_17_MILK", "Item_12_BUT", "Item~
```

```
## $ 'Price Per Unit' <dbl> 18.5, 29.0, 21.5, 27.5, 12.5, NA, 5.0, 33.5, 27.5, ~
## $ Quantity <dbl> 10, 9, 2, 9, 7, 10, 8, NA, 1, 3, 9, 8, 7, 6, 2, NA, ~
## $ 'Total Spent' <dbl> 185.0, 261.0, 43.0, 247.5, 87.5, 200.0, 40.0, NA, 2~
## $ 'Payment Method' <chr> "Digital Wallet", "Digital Wallet", "Credit Card", ~
## $ Location <chr> "Online", "Online", "Online", "Online", "Online", "~
## $ 'Transaction Date' <date> 2024-04-08, 2023-07-23, 2022-10-05, 2022-05-07, 20~
## $ 'Discount Applied' <lgl> TRUE, TRUE, FALSE, NA, FALSE, NA, TRUE, TRUE, FALSE~
```

4. Variable Description

Variable Name	Description	Data Type
Transaction ID	Unique identifier for each transaction	Nominal
Customer ID	Unique identifier for each customer	Nominal
Category	Product category (e.g., Patisserie, Butchers)	Nominal
Item	Specific purchased item	Nominal
Price Per Unit	Price of a single item unit	Numeric
Quantity	Quantity purchased	Numeric
Total Spent	Price × Quantity	Numeric
Payment Method	Payment mode (Digital Wallet, Credit Card, etc.)	Nominal
Location	Purchase location (Online or physical store)	Nominal
Transaction Date	Date of the transaction	Ordinal
Discount Applied	Indicates if a discount was used (True/False)	Boolean

5. Example Data (First Few Observations)

```
head(data, 5)
```

```
## # A tibble: 5 x 11
##   'Transaction ID' 'Customer ID' Category      Item      'Price Per Unit' Quantity
##   <chr>           <chr>         <chr>      <chr>      <dbl>      <dbl>
## 1 TXN_6867343    CUST_09      Patisserie Item_1~      18.5        10
## 2 TXN_3731986    CUST_22      Milk Products Item_1~      29          9
## 3 TXN_9303719    CUST_02      Butchers    Item_1~      21.5         2
## 4 TXN_9458126    CUST_06      Beverages   Item_1~      27.5         9
## 5 TXN_4575373    CUST_05      Food        Item_6~      12.5         7
## # i 5 more variables: 'Total Spent' <dbl>, 'Payment Method' <chr>,
## #   Location <chr>, 'Transaction Date' <date>, 'Discount Applied' <lgl>
```

6. Conclusion

This dataset provides a structured but intentionally “dirty” retail transaction record intended for data cleaning exercises. The documentation summarizes its structure and provides reproducible R code for loading and exploring the data. Furthermore, a in-depth domain expertise is not necessary for this dataset, since most people already have some everyday knowledge in this retail context.