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Data Cleaning Data Analysis 2024

Overview

- Introduction
- Problem Statement
- Approach and solution.
- Screenshots for reference.
- Thank you.

Introduction

Welcome to my data analysis project, which centers on a comprehensive dataset from Myntra. This dataset encompasses a variety of columns, including the URL of a product, product ID, category, discounts, offers, ratings, and other essential attributes.

Objective: To transform raw data into meaningful insights using the powerful features and formulas available in Microsoft Excel.

STEPS:

- Data Cleaning: Identifying and rectifying inconsistencies within the data.
- Handling Null Values: Addressing missing data to ensure a complete and accurate dataset.
- Data Filling: Imputing missing values to maintain data integrity.

After preparing the data, I applied various **Excel formulas and features to extract valuable insights** and answer pertinent questions related to the dataset.

In the following slides, I will present the problem statements along with screenshots to demonstrate the analysis process and the insights gained.

Part 1: Data Cleaning and Preparation

PROBLEM 1

Check for duplicate values in your dataset and remove them.

PROBLEM 2

Standardize the "DiscountOffer" column to a single format, ensuring all values are uniform.

PROBLEM 3

Identify rows where both
"DiscountPrice" and
"DiscountOffer" are null
and fill the
"DiscountPrice" with the
average discount price of
the respective category.

PROBLEM 4

Replace all null values in the "SizeOption" column with the text "Not Available

O1 Filtered out blank values using the unique product id column.

Convert data into table : Ctrl + T Then, Using filters remove duplicates, if any.

To Standardize the Discount offer column.

Remove Rs. from discount column.

 f_x =TRIM(SUBSTITUTE([@DiscountOffer],"Rs.",""))

To Standardize Discount % column.

Convert % into Rupees.

=IF(ISNUMBER(SEARCH("%",[@[Discount %]])),LEFT([@[Discount %]],SEARCH("%",[@[Discount %]])-1)/100*[@[OriginalPrice (in Rs)]],[@[Discount %]])

Convert Ruppes into %.

 f_x =IF([@[Discount Rupee]]="","",[@[Discount Rupee]]/[@[OriginalPrice (in Rs)]]*100)

To remove OFF, convert formulas to text - > Ctrl +C, Ctrl + V(values). Then, Text to column -> Using Delimited choose space.

03

To fill the DiscountOffer(%) with Average discount price of that category.

```
fx =IF([@[Discount Offer]]="",AVERAGEIFS(N:N,D:D,[@Category]),[@[Discount Offer]])
```

To fill the Discount Price with the average of respective category (rupees).

```
fx =IF([@[DiscountPrice (in Rs)]]="",[@[Discount- Category]]*[@[OriginalPrice (in Rs)]]/100,[@[DiscountPrice (in Rs)]])
```

To fix values of DiscountedPrice and Discount% columns - > Ctrl +C, Ctrl + V(values).

04

To replace all null values in Size Option with Not available:

```
f_x =IF(J2="","Not available",J2)
```

Part 2: Data Analysis

PROBLEM 1

Calculate the overall average original price for products with ratings greater than 4

PROBLEM 2

Count the number of products with a discount offer greater than 50% OFF

PROBLEM 3

Count the number of products available in size "M".

PROBLEM 4

Create a new column to label the products as "High Discount" if the discount offer is greater than 50% OFF, otherwise label them as "Low Discount".

O1 AverageIFS.

Av. original price for products with ratings greater than 4.

1890.640099

 f_x

=AVERAGEIFS(Table1[[#All],[OriginalPrice (in Rs)]],Table1[[#All],[Ratings]],">4")

O2 CountIF.

Count the No. of products with a discount greater than 50% OFF.

11301

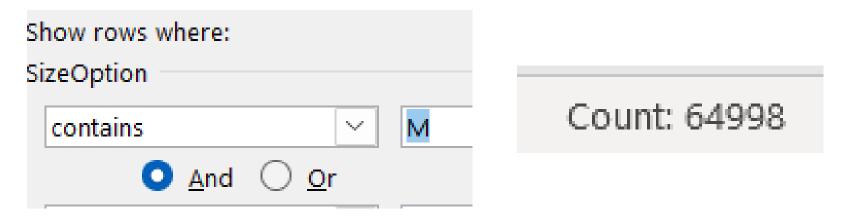
fx

=COUNTIF(Table1[[#All],[DiscountOffer]],"50")

03

Count the number of products available in size "M"

Approach 1: Filtering "Using Text Contains "



Approach 2: Searching "M", converting to T/F, --converting to 1/0, adding.

```
f_x =SUMPRODUCT(--(ISNUMBER(SEARCH("M",J:J))))
```

A new column: If Discount>50 -> High else Low Discount.

```
fx =IF([@DiscountOffer]>50,"High Discount","Low Discount")
```

Part 3: Data Retrieval and Lookup

PROBLEM 1

Use VLOOKUP/XLOOKUP

to find the product
brand, price, and rating of
the product with
Product_id "11226634"

PROBLEM 2

Find the
"DiscountPrice" for
the product with the
Product ID "6744434"
using the INDEX and
MATCH functions

PROBLEM 3

Utilize nested xlookup to find any column's detail of a product with it's product id.

01 Using XLOOKUP.

Product ID:			f_{x}	=XLOOKUP(S13,Table1[Product_id],Table1[BrandName],"No Match",0)
11226634	L		fx	=XLOOKUP(S13,Table1[Product_id],Table1[DiscountPrice],"No match",0)
Brand	Price	Rating	fx	=XLOOKUP(S13,Table1[Product_id],Table1[Ratings],"No Match",0)
Maniac	467	3.9		

Using VLOOKUP.

```
f_x =VLOOKUP(S13,B3:P1000000,{2,10,14},0)
```

02 Index and Match.

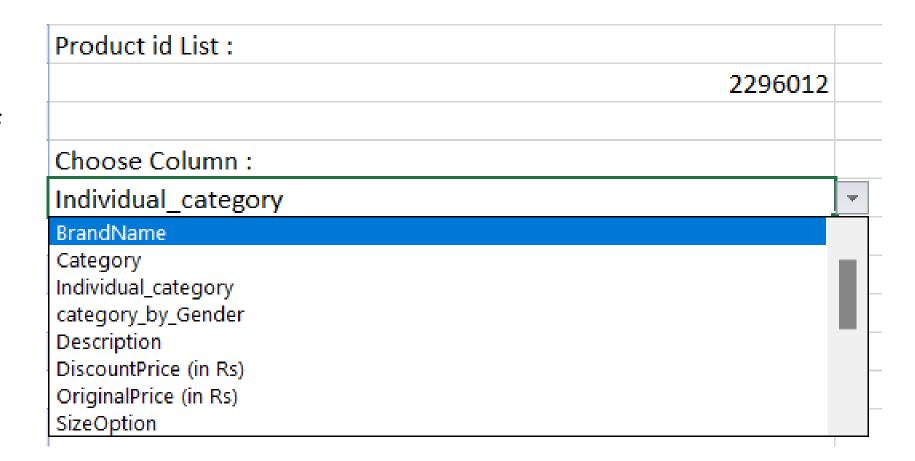
Product id:	
6744434	f_x =INDEX(Table1[DiscountPrice],MATCH(T25,Table1[Product_id],0))
DiscountPrice	
599	

01

Nested XLookup.

- Using **Data validation**, first create a list of product IDs.
- Then, Create another list of all other column headers.

Then, use nested Xloopup for extracting values of your choice.





=XLOOKUP(R25,Table1[Product_id],XLOOKUP(R28,Table1[[#Headers],[BrandName]:[DiscountType]],Table1[[BrandName]:[DiscountType]],"No Match",0),"No match",0)



Thank You

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