

Ecommerce Sales Analysis

Domain: E-commerce Sales and Promotions
Function: Optimize sales and profitability

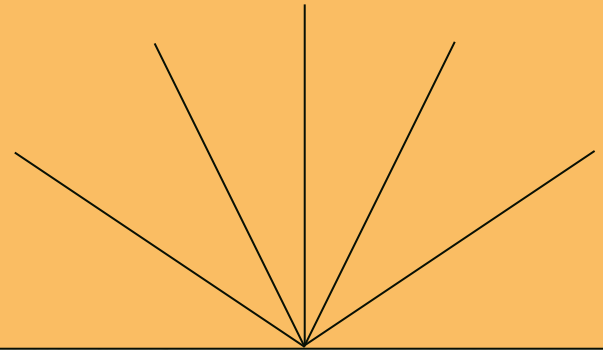
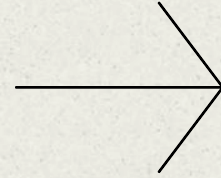
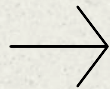


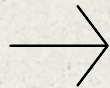
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statement



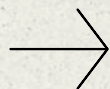
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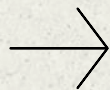
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PROBLEM STATEMENT

The company is experiencing challenges in optimizing sales and promotions strategies.

There is a need to understand user behavior, product performance, and the impact of promotions across various dimensions.

OBJECTIVE

To analyze sales and promotions data to identify key trends and insights. Then segment analysis by Overview, Product, Day/Time, Brand, and State for targeted insights.

By examining key performance indicators (KPIs) and detailed sales metrics, aim is to:

1. Identify best-selling brands and high-revenue generators.
 2. Assess total revenue and profit margins to gauge financial health.
 3. Understand the impact of brand, customer segments ,state, time, category and discounts on sales.
 4. Provide actionable recommendations for enhancing sales and marketing strategies.
-



Tools Used

Analytical & Visual:

- Microsoft Power BI

Presentation:

- Microsoft power point



DATASET OVERVIEW

Data source: Internet

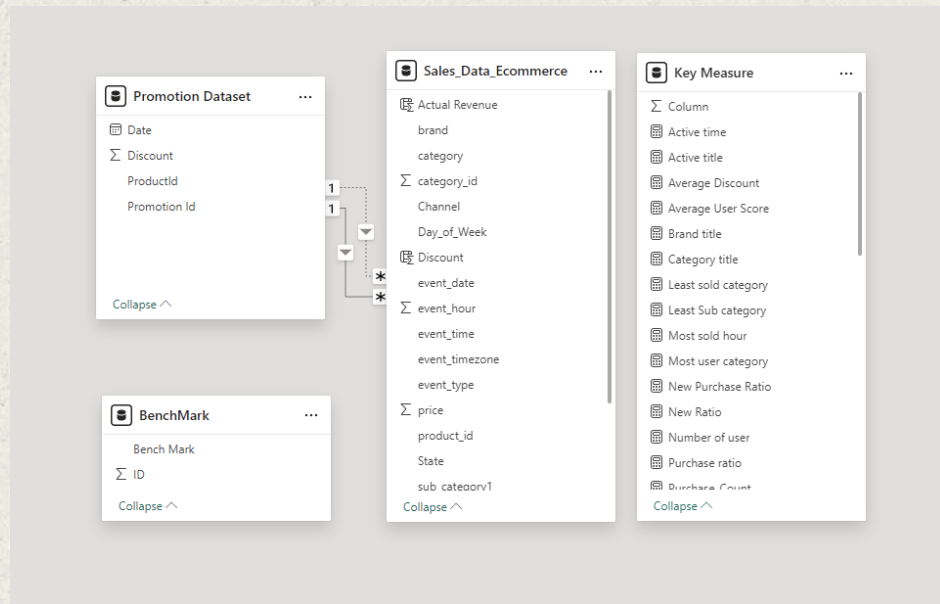
Time period: 2019

Data size: Sales_Data_Ecommerce (160001,18),
Promotion(62,4)

Key columns:

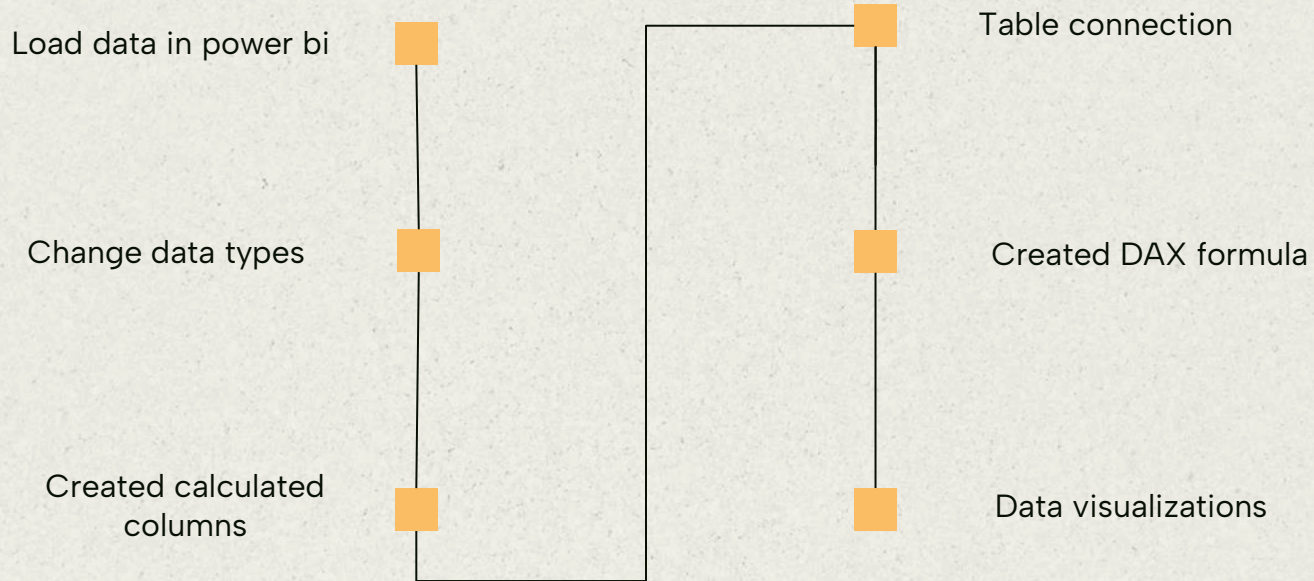
Actual Columns: Day_of_week,channel, event_hour,
event_type, category,sub_category1, sub_category2
brand, price, user_session, State, User_Score

Dax/Calculated columns: Active title, Average
discount, Average user score, Purchase ratio, Set
benchmark, Top brand by customer, Top reviewed
brand, top sold category etc.



Data model

ANALYSIS WORKFLOW



PRIMARY INSIGHTS

Total Sales

\$5.37M

Top selling brand

Apple

Purchase
ratio

9.11%

Total User

158K

Most
sold time

10 am

Top channel
by sales

Browser

Most active
user day

Friday

Top selling
category

Electronic

SECONDARY INSIGHTS

Key Findings

This analysis provides a comprehensive overview of the company's sales performance, focusing on various aspects such as total sales, purchase ratio, state performance, product categories, customer segments, and daily trends. The data reveals a total sales figure of \$5.37M with a purchase ratio of 9.11%. The best-selling brand is Apple., and most of the users visit us using browser instead of app. However, the company faces a significantly low rating of 2.51 and most of the categories fail to make \$20k in revenue

Key findings include:

- 1.State-wise performance: Most sales happen on MS (Mississippi) but other are not too behind.
 - 2.Product categories: Electronics lead in sales and discount. Stationary leads in purchase ration and average score.
 - 3.Customer segments: 78% of our customers only visit us and don't buy.
 - 4.Daily trends: Most sales happen in 05am-2pm. Friday most users are active and on Sunday most sells happen.
 - 5.Brand: Apple is most sold, purchase ratio and discounted brand. But most users visit Samsung brands.
-

Recommendations

To improve performance, the company should:

1. Focus on conversion: With 78% of visitors not making a purchase, implement strategies to improve conversion rates. This could include targeted promotions, improved product descriptions, or streamlined checkout processes.
2. Optimize for peak hours: Concentrate marketing efforts and ensure optimal site performance during the 5am–2pm window when most sales occur.
3. Leverage Friday traffic: Develop special Friday promotions or flash sales to capitalize on high user activity.
4. Sunday sales boost: Create Sunday-specific deals to further enhance the already strong sales performance on this day.
5. State-specific strategies: While Mississippi leads in sales, develop tailored approaches for other states to boost their performance and balance regional sales.

Category focus:

1. – Promote electronics more aggressively, as it leads in sales and discounts.
 2. – Investigate why most categories fail to reach \$20k in revenue and develop strategies to improve their performance.
 3. – Learn from the stationery category's success in purchase ratio and customer satisfaction to apply to other categories.
-

Recommendations

Brand strategy:

1. Strengthen partnership with Apple, leveraging its high sales and purchase ratio.
2. Develop strategies to convert Samsung browsers into buyers, potentially through exclusive deals or improved product showcasing.

Improve overall customer satisfaction: Address the low average rating of 2.51 by gathering more detailed customer feedback and implementing improvements in product quality, customer service, and user experience.

Mobile app enhancement: Given that most users prefer the browser, invest in improving the mobile app to encourage more app-based purchases, which often lead to higher customer loyalty.

158K

Total User

2.51

Average Rating

\$5.37M

Total Revenue

9.11%

Purchase Ratio

Apple

Top brand by sales

Browser

Top Channel by sales

Overview

Product

Day/time

Brand

State

Bench Mark

Average
DiscountAverage
RatingNumber of
UserPurchase
Ratio

Revenue

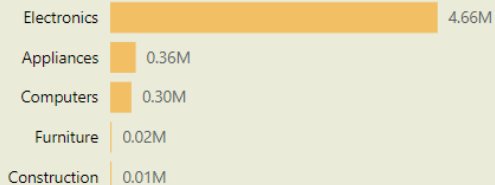
Rank

5

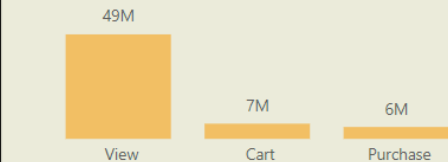
Value

☐ Bottom☒ Top

Which category has how much/many Revenue ?

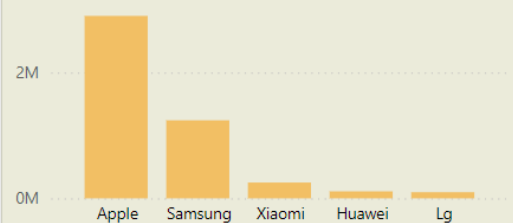


Which type of user generate how much revenue?

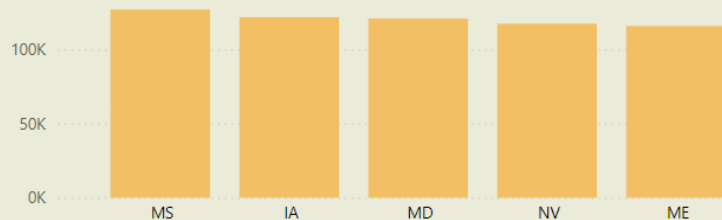


The majority of revenue comes from viewed customers, but they do not proceed to purchase.

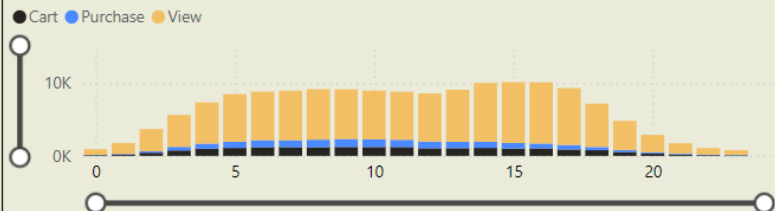
Which brands has how much/many Revenue ?



Which state has how much/many Revenue ?



How many users are active in which hour?



Most users are of type View throughout the whole day.

Electronics Stationery Stationery Country_yard Electronics

Top Sold

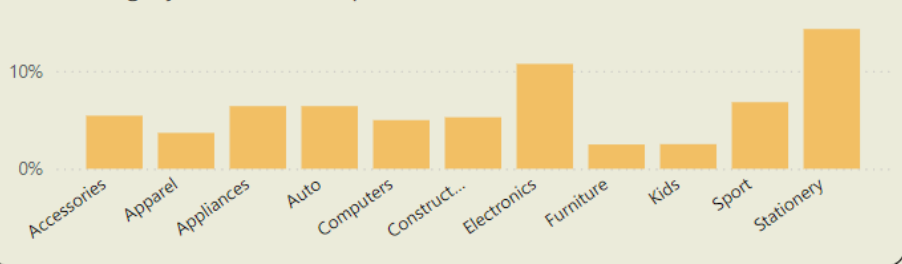
Top Purchase Ratio

Top Review Product

Least Sold

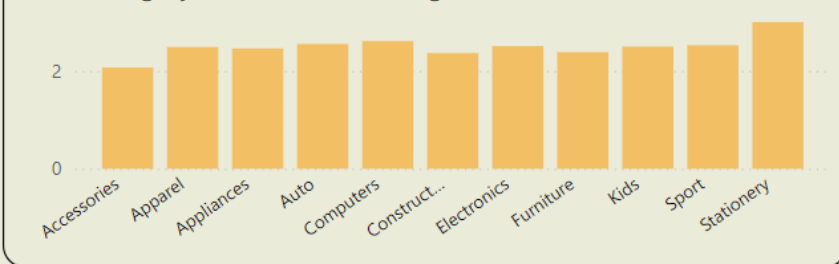
Top Discount on

Which category has how much purchase ratio?



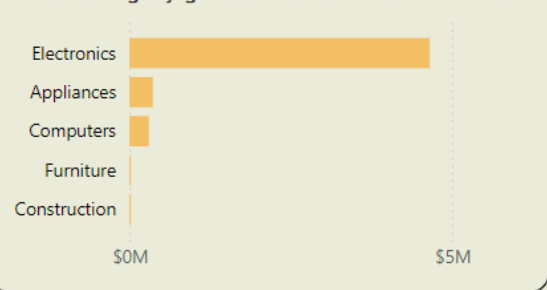
Stationery has highest purchase ratio.

Which category has how much average score?



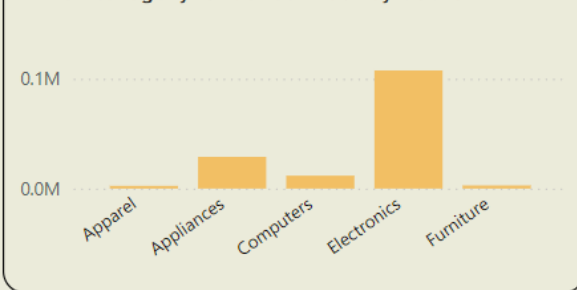
Stationery has highest average score.

Which category generates how much revenue?



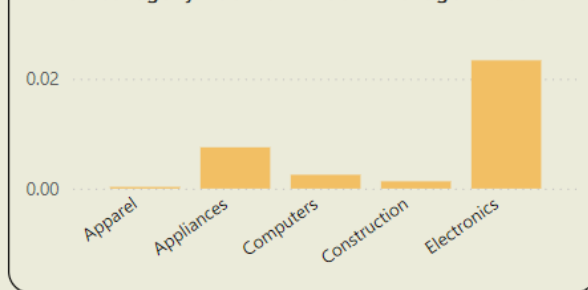
Electronics is most sold category.

Which category is looked most by users?



Electronics is most visited category.

Which category has how much Average Discount?



Electronics is most discounted category.

Overview

Product

Day/time

Brand

State

03 PM

Most Active Time

10 AM

Most sold time

Sunday

Most Revenue Day

Friday

Most Active Day

View

Most User Category

Overview

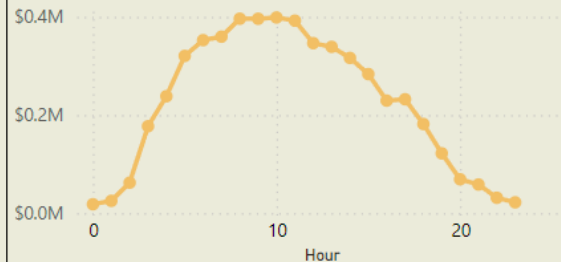
Product

Day/time

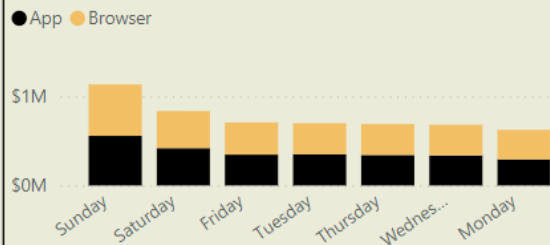
Brand

State

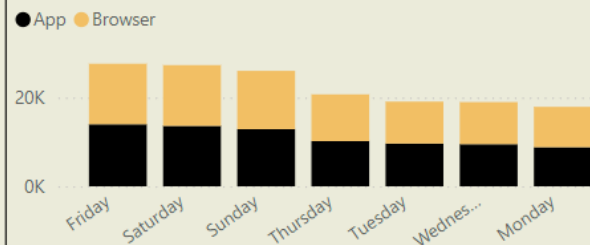
Which hour has higher sales?



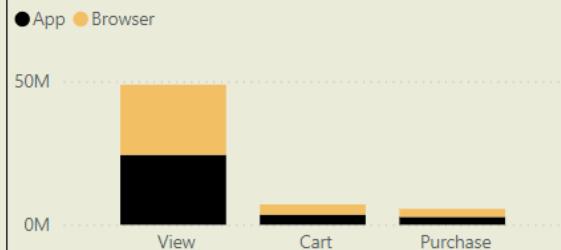
Which day generates highest revenue?



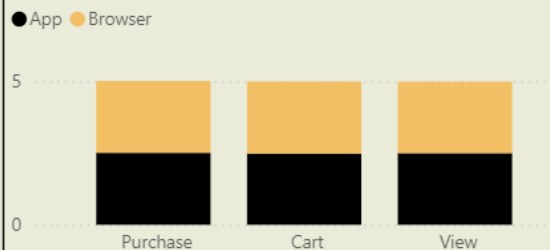
Which day has higher users?



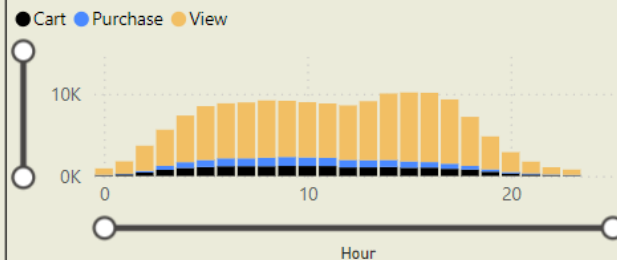
Which type of user generate how much revenue?



Which type of user gives highest rating?



Which type of users are most active and when?



Samsung

Msi

Apple

Apple

Apple

Xiaomi

Top Brand By User

Best Reviewed Brand

Top Discounted Brand

Top Brand By
Purchase Ratio

Top Brand By Sales

Most Category Brand

Overview

Product

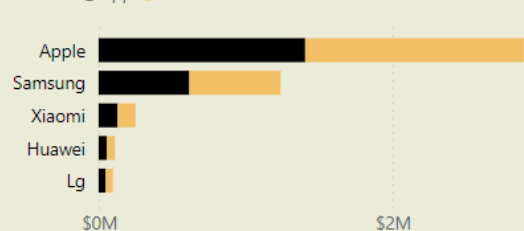
Day/time

Brand

State

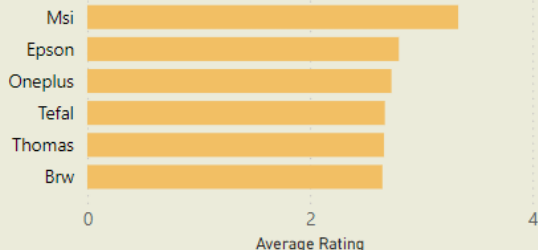
Which brands generate how much revenue?

Channel ● App ● Browser



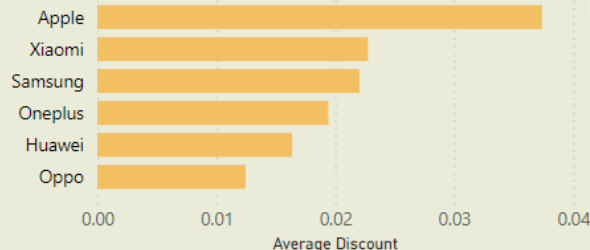
Apple generates highest revenue.

Which brands have good average score?



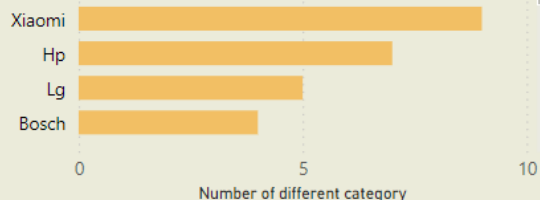
MSI highest reviewed brand.

Which brand gets how much discount?



Apple gets highest discount.

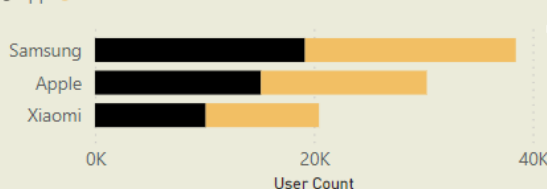
Which brand sold how many different product categories?



Xiaomi sales most different products categories

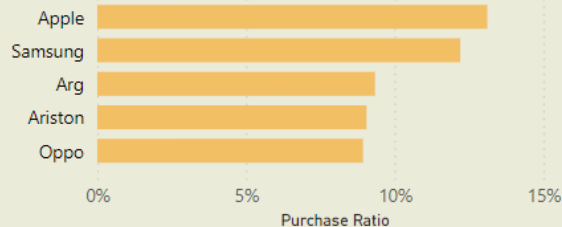
Which brand gets how much user and by which channel?

● App ● Browser



Samsung gets most users.

Which brand has how much purchase ratio?



Apple has highest purchase ratio.

MS

Top State By sales

GA

Top Sate By Users

WY

Top Sate By Discount

Overview

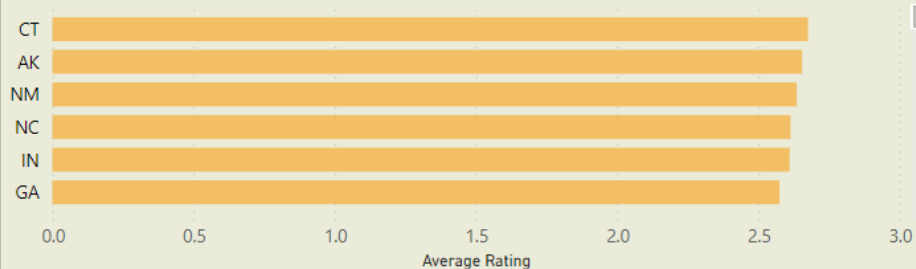
Product

Day/time

Brand

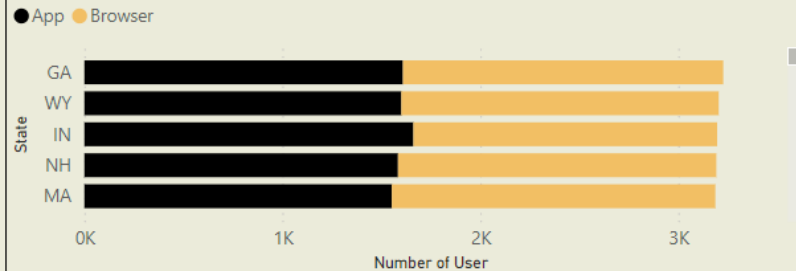
State

User of which state give what kind of score?



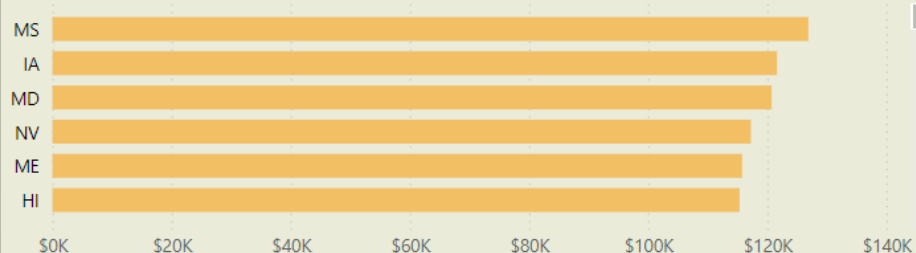
User from **Connecticut** give highest rating.

which state has how much user and by which channel?



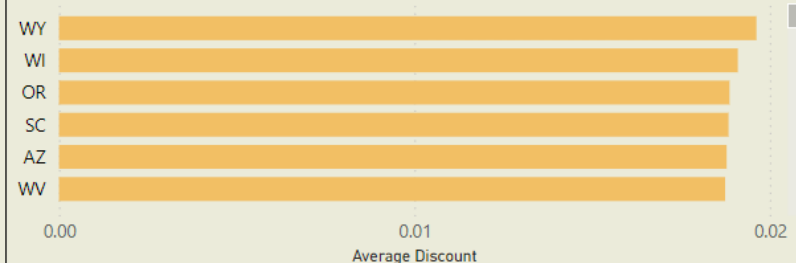
Most user are from **Georgia**.

Which state generates how much revenue?



Mississippi generates highest revenue.

Which state gets how much discount?



Wyoming gets highest discount.

Thank you!!!

—Amanat Mahmud

