

iPhone Sales Data Analysis

Uncovering Trends and Insights from iPhone Sales Data



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Introduction

The iPhone, introduced by Apple in 2007, revolutionized the smartphone industry by combining a sleek design with advanced functionality. Known for its high-quality build, intuitive user interface, and seamless integration with Apple's ecosystem, the iPhone quickly became a global symbol of innovation. With each new release, the iPhone continues to push the boundaries of technology, offering enhanced features such as powerful processors, improved camera systems, and regular software updates. Today, the iPhone remains one of the best-selling smartphones worldwide, influencing trends in mobile technology and design.



1. Project Overview

1.1 Description

This project aims to analyze iPhone sales data to uncover patterns, trends, and insights. The dataset includes attributes like product name, brand, sale price, MRP, discount percentage, star rating, RAM, and customer feedback metrics. The analysis focuses on pricing strategies, customer reviews, product popularity, and more.

1.2 Objective

The objective of this project is to analyze and visualize the iPhone sales dataset to uncover insights related to product performance, customer preferences, pricing strategies, and sales trends.

Specifically, the project aims to:



- **Understand Product Popularity:** Identify the most popular iPhone products based on ratings, reviews, and customer engagement. This will help highlight which models are most favoured by consumers.
- **Analyze Pricing and Discounts:** Examine the relationship between sale prices, the manufacturer's recommended price (MRP), and discount percentages to understand the pricing strategies used for different iPhone models.
- **Evaluate Customer Sentiment:** Assess customer satisfaction by analyzing star ratings and reviews. This will provide insights into how customers perceive the quality and value of the products.
- **Assess the Impact of Specifications on Sales:** Investigate the relationship between iPhone specifications (e.g., RAM) and factors such as sale price, star rating, and customer reviews to understand how technical specifications influence sales performance.

Generate Revenue Insights: Calculate and visualize total revenue, average sale prices, and sales trends to assess the overall performance of iPhone sales in the dataset.

Create an Interactive Dashboard: Develop a user-friendly Power BI dashboard that provides interactive and actionable insights through dynamic visuals, including bar charts, pie charts, scatter plots, and KPI cards. The dashboard will allow users to explore different aspects of the data, including product performance, customer satisfaction, and revenue.

By achieving these objectives, this project aims to provide valuable insights into iPhone sales, helping stakeholders make data-driven decisions regarding inventory, pricing, marketing, and product development strategies.



1.3 Tools

Data Cleaning: Microsoft Excel, Power Query.

Data Storage and Analysis: MySQL.

Visualization: Tableau or Power BI.

2. Dataset Description

This table provides a detailed description of the key variables in the iPhone sales dataset, which includes product details, pricing, customer feedback, and technical specifications. These attributes will be analyzed to gain insights into product performance, customer sentiment, and sales trends.

Column Name	Description	Data Type
Product Name	The name of the iPhone model.	Text
Product URL	The URL link to the product page on the retailer's website.	Text
Brand	The brand of the product, which in this case will always be "Apple".	Text
Sale Price	The sale price of the product, i.e., the price at which the iPhone is sold after any discounts.	Numeric
MRP	The Manufacturer's Recommended Price, which is the original price set by Apple.	Numeric
Discount Percentage	The discount percentage applied to the product, calculated based on the difference between MRP and Sale Price.	Numeric
Number of Ratings	The total number of ratings the product has received from customers.	Numeric
Number of Reviews	The total number of written reviews the product has received from customers.	Numeric
UPC	The unique product code (Universal Product Code) assigned to the product.	Text
Star Rating	The average star rating given by customers, usually on a scale of 1 to 5.	Numeric
RAM	The RAM size of the iPhone model, typically in GB.	Numeric

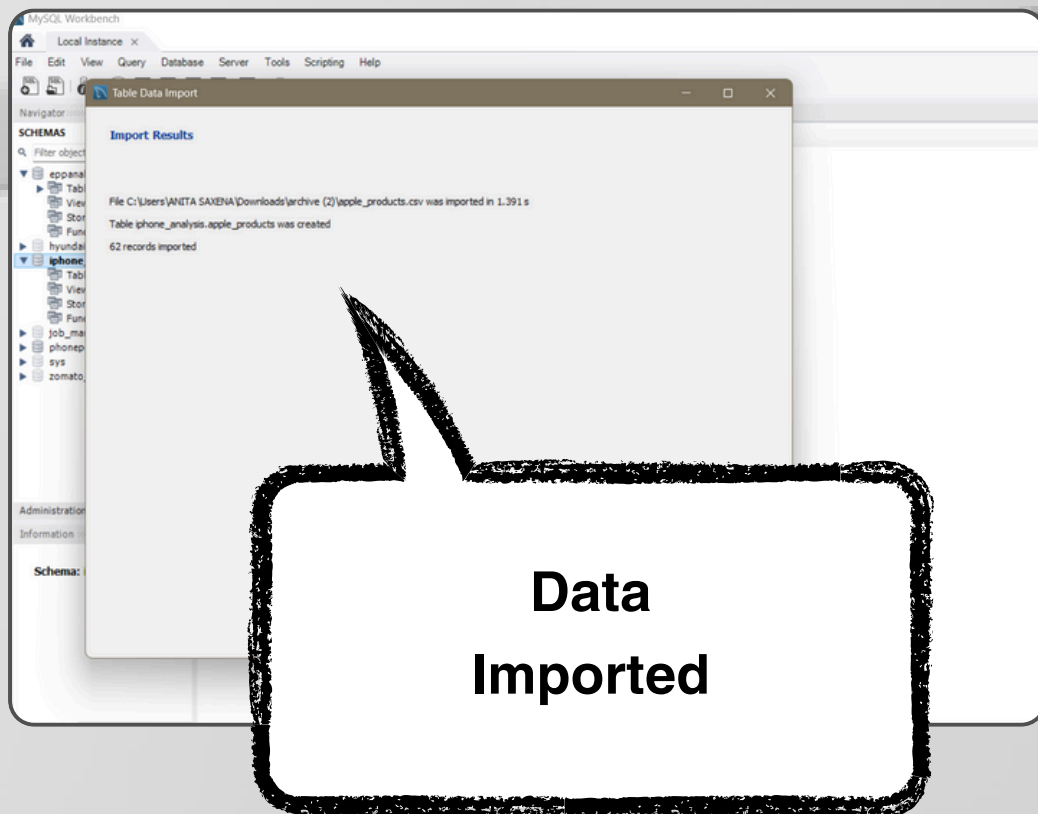
3. Data Cleaning and Preparation for iPhone Sales Analysis in MySQL

To perform data cleaning in MySQL for the iPhone sales dataset, we can follow a structured process using SQL queries to identify and handle missing values, duplicates, outliers, inconsistencies, and ensure the data is ready for analysis. Below are the detailed steps with corresponding SQL queries:

Step 1: Load Data into MySQL

Create a database and import the CSV data in MySQL by running a query

Query: **Create Database** `iphone_analysis;`



Step 2: Find Missing Values

```
SELECT COUNT(*) AS missing_values FROM apple_products
WHERE product_name IS NULL OR Storage_capacity is null or
colour is null
OR sale_price IS NULL OR mrp IS NULL OR
discount_percentage IS NULL
OR number_of_ratings IS NULL OR number_of_reviews IS NULL
OR UPC IS NULL OR star_rating IS NULL OR ram IS NULL;
```

Step 3: Delete Unwanted Column From Table

```
ALTER TABLE apple_products
DROP COLUMN product_url;

ALTER TABLE apple_products
DROP COLUMN Brand;
```

Step 4: Check Duplicates

```
SELECT upc, COUNT(*) AS duplicate_count
FROM apple_products
GROUP BY upc
HAVING duplicate_count > 1;
```

Step 5: Add price_category column

```
ALTER TABLE apple_products
ADD COLUMN Price_Category VARCHAR(10);

UPDATE apple_products
SET Price_Category = CASE
    WHEN Sale_Price < 30000 THEN 'Low'
    WHEN Sale_Price BETWEEN 30000 AND 60000 THEN 'Medium'
    WHEN Sale_Price > 60000 THEN 'High'
    ELSE 'Unknown'
END;
```


Step 6: Add ram_category Column

```
ALTER TABLE apple_products
ADD COLUMN RAM_Category VARCHAR(20);

UPDATE apple_products
SET RAM_Category = CASE
    WHEN RAM < 4 THEN 'Low'
    WHEN RAM BETWEEN 4 AND 6 THEN 'Medium'
    WHEN RAM > 6 THEN 'High'
    ELSE 'Unknown'
END;
```

Step 7: Add Revenue Column

```
ALTER TABLE apple_products
ADD COLUMN Revenue DECIMAL(15, 2);

UPDATE apple_products
SET Revenue = Sale_Price * (Number_Of_Ratings * 0.1);

SET SQL_SAFE_UPDATES = 0;
```

Step 8: Add Total Engagement Column

```
ALTER TABLE apple_products  
ADD COLUMN Total_Engagement INT;  
  
UPDATE apple_products  
SET Total_Engagement = Number_Of_Ratings +  
Number_Of_Reviews;
```

Step 9: Add discount amount column

```
ALTER TABLE apple_products  
ADD COLUMN Discount_Amount DECIMAL(10, 2);  
  
UPDATE apple_products  
SET Discount_Amount = MRP - Sale_Price;
```

Step 10: Add Quantity Sold Column

Query:

```
ALTER TABLE apple_products  
ADD COLUMN Quantity_Sold INT;  
  
UPDATE apple_products  
SET Quantity_Sold = ROUND(Revenue / Sale_Price);
```



Analysis Using MySQL



Comprehensive SQL Data Analysis for iPhone:

Sales, Customer Engagement, Pricing, and Product Performance Insights

1. Sales and Revenue Analysis

- What is the total revenue generated by each price category?
- Which product has generated the highest revenue?
- What is the average sale price of products across storage capacities?
- What is the total quantity sold for each product?

2. Customer Engagement Analysis

- Which product has the highest total engagement (ratings + reviews)?
- What is the average star rating for each price category?
- What is the correlation between the number of reviews and ratings?
- Which RAM category gets the most customer engagement?

3. Pricing and Discounts

- Which products offer the highest discounts?
- What is the total discount amount offered for each price category?
- What is the average MRP for products in each RAM category?
- What is the relationship between storage capacity and discount percentage?

4. Product Performance

- Which product variant (colour + RAM + storage) has sold the most units?
- What is the most popular colour for each price category?
- What is the average quantity sold for products in each star rating range?

Sales and Revenue Analysis

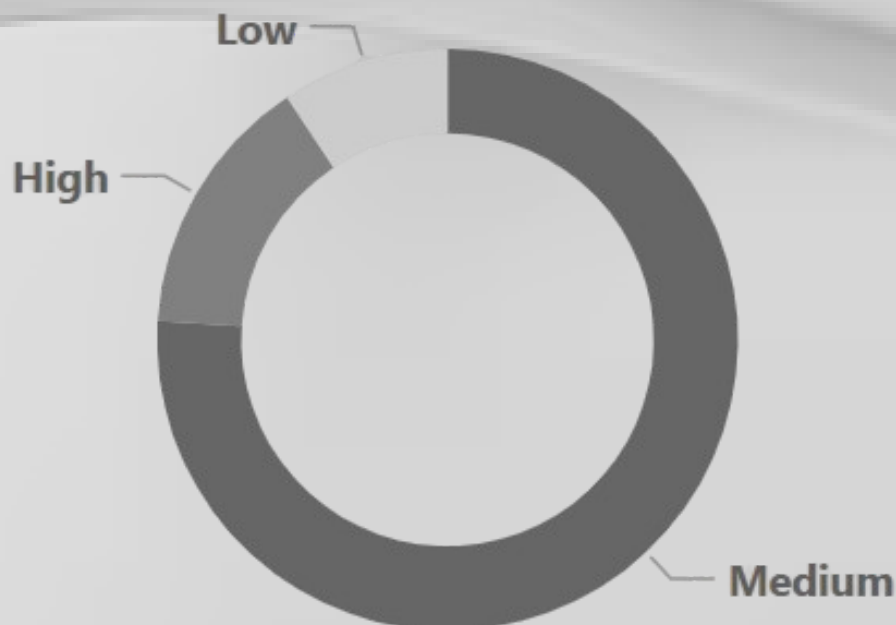
Q 1. What is the total revenue generated by each price category?

The highest revenue is generated by products in the "Medium-Range" price category, indicating that customers find products in this range to offer the best balance between price and features, making them highly popular and profitable.

```
SELECT
  Price_Category, SUM(Revenue) AS Total_Revenue
FROM
  apple_products
GROUP BY Price_Category
ORDER BY Total_Revenue DESC;
```

	Price_Category	Total_Revenue
▶	Medium	4694070877.20
	High	903518931.20
	Low	575128828.40

Total Revenue by Price Category



Q 2. Which product has generated the highest revenue?

The product with the highest revenue is the Apple iPhone SE, emphasizing its popularity and high price point.

```
SELECT
  Product_Name, SUM(Revenue) AS Total_Revenue
FROM
  apple_products
GROUP BY Product_Name
ORDER BY Total_Revenue DESC
LIMIT 5;
```

	Product_Name	Total_Revenue
▶	Apple iPhone SE	2013368475.00
	Apple iPhone XR	1654103837.00
	Apple iPhone 11	1537067523.60
	Apple iPhone 11 Pro	291033521.20
	Apple iPhone 8	258766200.00

Product with Highest Revenue



Q 3. What is the average sale price of products across storage capacities?

Products with larger storage capacities tend to have higher average sale prices, suggesting that customers perceive additional storage as a valuable upgrade.

```
SELECT
```

```
    TRIM(Storage_Capacity) AS Storage_Capacity, AVG(Sale_Price) AS Avg_Sale_Price
```

```
FROM apple_products
```

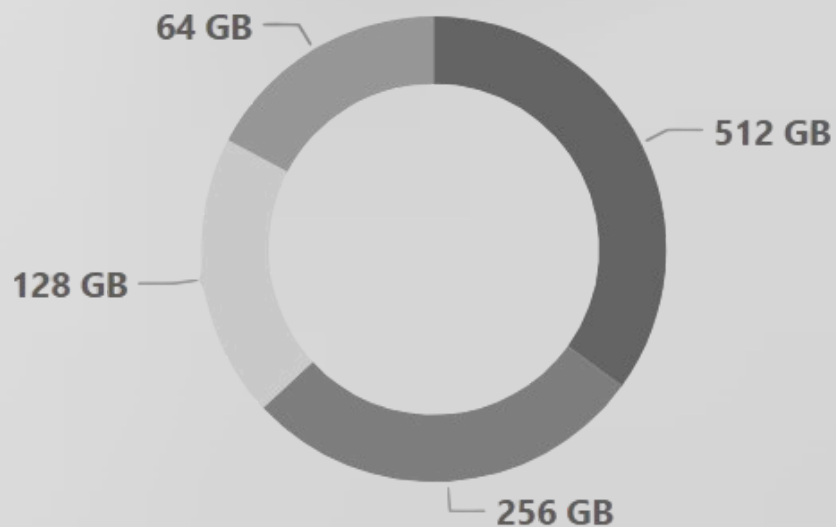
```
WHERE Storage_Capacity != "" AND Storage_Capacity IS NOT NULL
```

```
GROUP BY TRIM(Storage_Capacity)
```

```
ORDER BY Avg_Sale_Price DESC;
```

	Storage_Capacity	Avg_Sale_Price
►	512 GB	129400.0000
	256 GB	103857.0714
	128 GB	72851.7826
	64 GB	63769.6000

Average Sale Price by Storage Capacity

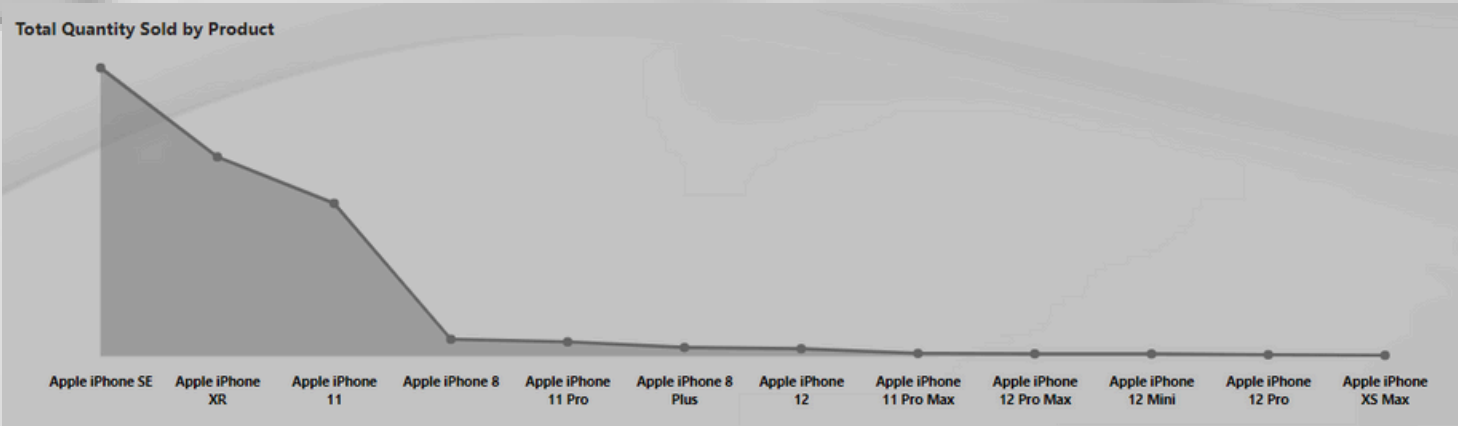


Q 4. What is the total quantity sold for each product?

The product with the highest total quantity sold is the iPhone SE, which appeals to budget-conscious customers due to its affordability.

```
SELECT
    Product_Name, SUM(Quantity_Sold) AS Total_Sold
FROM
    apple_products
GROUP BY Product_Name
ORDER BY Total_Sold DESC;
```

	Product_Name	Total_Sold
▶	Apple iPhone SE	57526
	Apple iPhone XR	39762
	Apple iPhone 11	30477
	Apple iPhone 8	3360
	Apple iPhone 11 Pro	2835
	Apple iPhone 8 Plus	1715
	Apple iPhone 12	1468
	Apple iPhone 11 Pro Max	540
	Apple iPhone 12 Pro Max	464
	Apple iPhone 12 Mini	442
	Apple iPhone 12 Pro	274
	Apple iPhone XS Max	145



Customer Engagement Analysis

Q 1. Which product has the highest total engagement (ratings + reviews)?

The product with the highest total quantity sold is the iPhone SE, which appeals to budget-conscious customers due to its affordability.

```
SELECT
    Product_Name, SUM(Total_Engagement) AS Total_Engagement
FROM
    apple_products
WHERE
    Total_Engagement IS NOT NULL
    AND Total_Engagement > 0
GROUP BY Product_Name
ORDER BY Total_Engagement DESC
LIMIT 5;
```

	Product_Name	Total_Engagement
▶	Apple iPhone SE	624202
	Apple iPhone XR	431618
	Apple iPhone 11	328133
	Apple iPhone 8	35988
	Apple iPhone 11 Pro	30436

Product with Highest Engagement

Apple iPhone SE

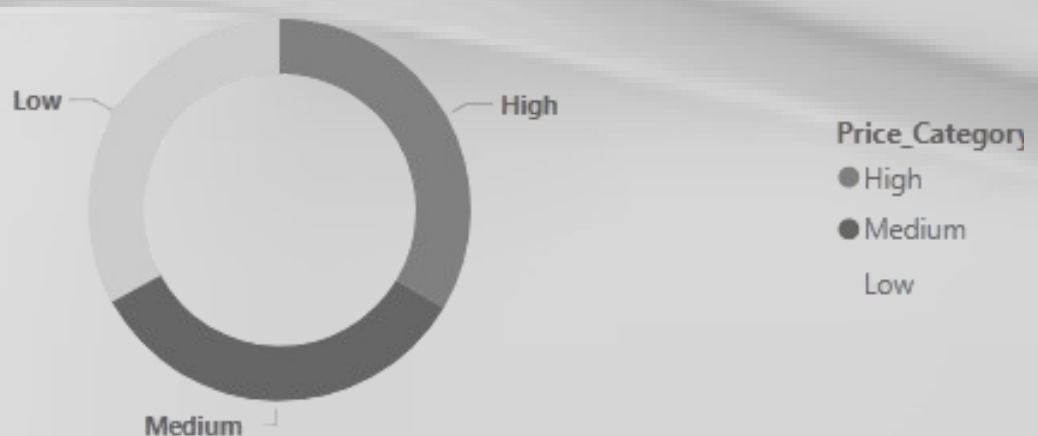
Q 2. What is the average star rating for each price category?

The Medium and High range price categories have the highest average star rating, showing that customers are highly satisfied with value-for-money products.

```
SELECT
  Price_Category,
  ROUND(AVG(Star_Rating), 0) AS Avg_Star_Rating
FROM
  apple_products
GROUP BY Price_Category
ORDER BY Avg_Star_Rating DESC;
```

	Price_Category	Avg_Star_Rating
▶	Medium	5
	High	5
	Low	4

Average Star Rating by Price Category

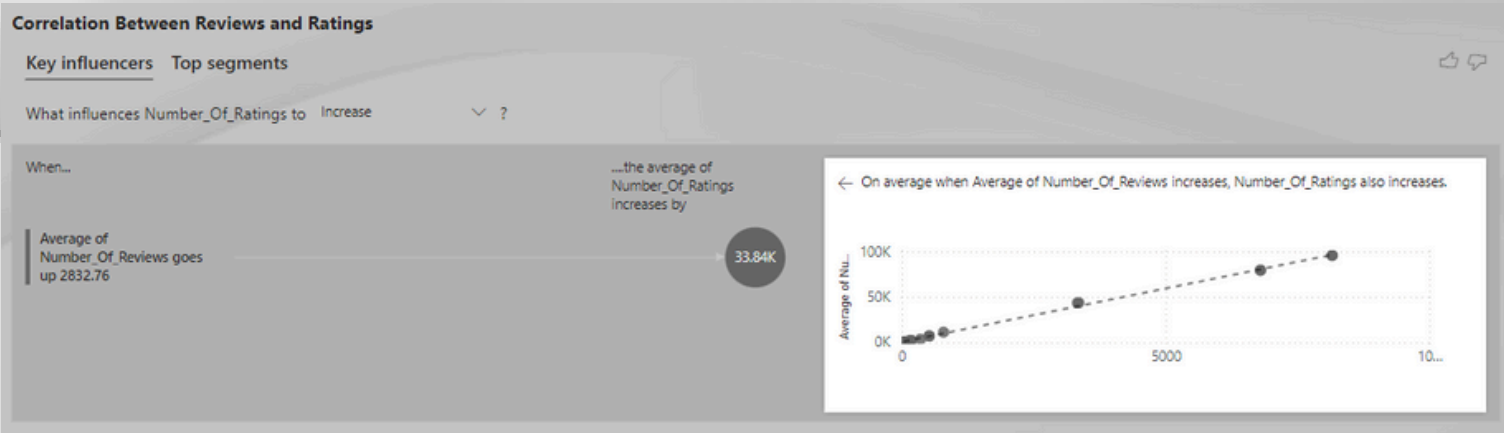


Q 3. What is the correlation between the number of reviews and ratings?

Products with a higher number of reviews tend to have a proportional increase in ratings, suggesting that popular products are well-received.

```
SELECT
    Price_Category,
    ROUND(AVG(Star_Rating), 0) AS Avg_Star_Rating
FROM
    apple_products
GROUP BY Price_Category
ORDER BY Avg_Star_Rating DESC;
```

	Number_Of_Ratings	Number_Of_Reviews	Rating_Review_Ratio
▶ 3431	356	356	9.6
3431	356	356	9.6
3431	356	356	9.6
11202	794	794	14.1
11202	794	794	14.1
3431	356	356	9.6
3431	356	356	9.6
11202	794	794	14.1
1454	149	149	9.8
79512	6796	6796	11.7
79512	6796	6796	11.7
79582	6804	6804	11.7
79512	6796	6796	11.7
79512	6796	6796	11.7



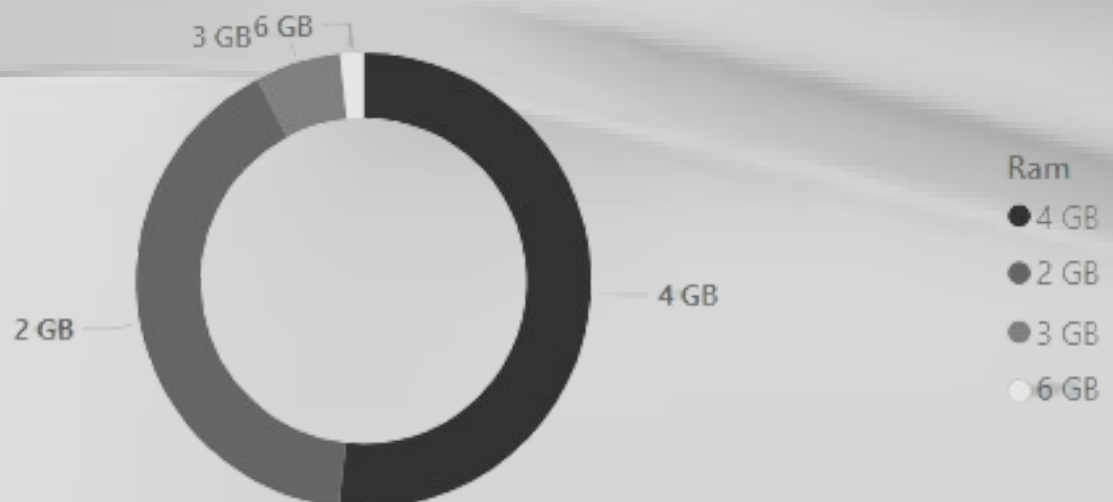
Q 4. Which RAM category gets the most customer engagement?

The RAM category 4GB sees the most engagement, implying that customers value performance-oriented devices.

```
SELECT
  RAM, SUM(Total_Engagement) AS Total_Engagement
FROM
  apple_products
GROUP BY RAM
ORDER BY Total_Engagement DESC;
```

	RAM	Total_Engagement
▶	4 GB	820616
	2 GB	575055
	3 GB	86308
	6 GB	23510

Customer Engagement by RAM Category



Pricing and Discounts

Q 1. Which Top 5 products offer the highest discounts?

The product with the highest discount is the iPhone 11 Pro, showcasing retailers' focus on clearing older models.

```
SELECT
    Product_Name, MAX(Discount_Percentage) AS Max_Discount
FROM
    apple_products
GROUP BY Product_Name
ORDER BY Max_Discount DESC
LIMIT 5;
```

	Product_Name	Max_Discount
▶	Apple iPhone 11 Pro	29
	Apple iPhone SE	24
	Apple iPhone XR	20
	Apple iPhone 12 Mini	14
	Apple iPhone 11	14

Top 5 Products with the Highest Discounts



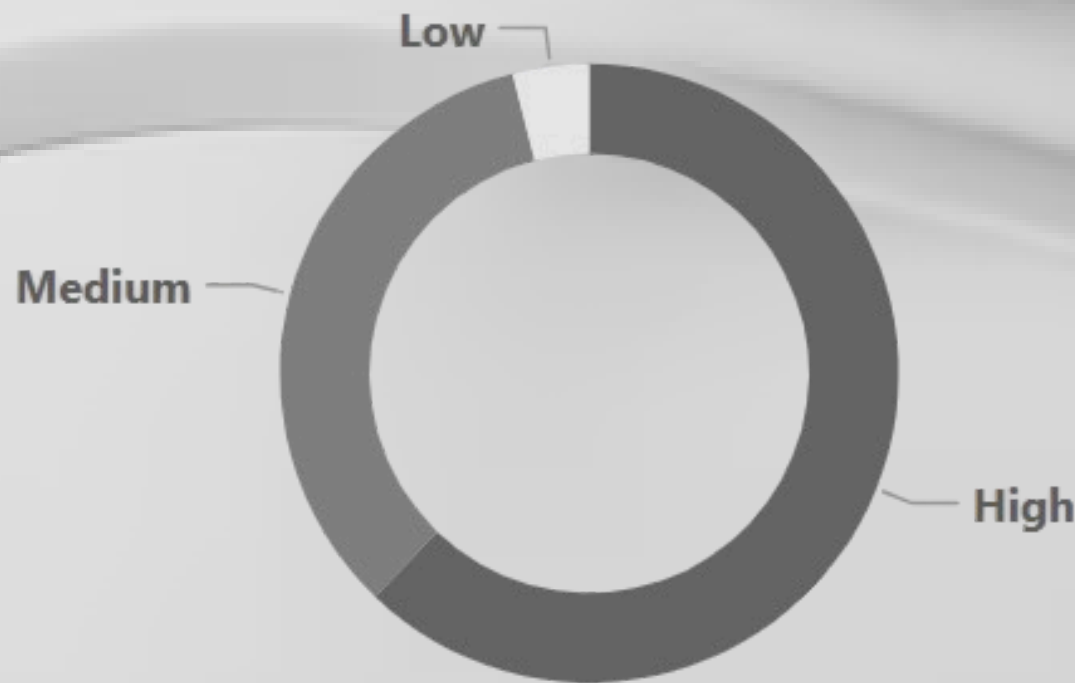
Q 2. What is the total discount amount offered for each price category?

"High" price category products have the largest total discount amount, indicating a strategy to attract price-sensitive customers.

```
SELECT
    Price_Category, Round(SUM(Discount_Amount),0) AS
    Total_Discount
FROM
    apple_products
GROUP BY Price_Category
ORDER BY Total_Discount DESC;
```

	Price_Category	Total_Discount
▶	High	307801
	Medium	167416
	Low	19802

Total Discount Amount by Price Category



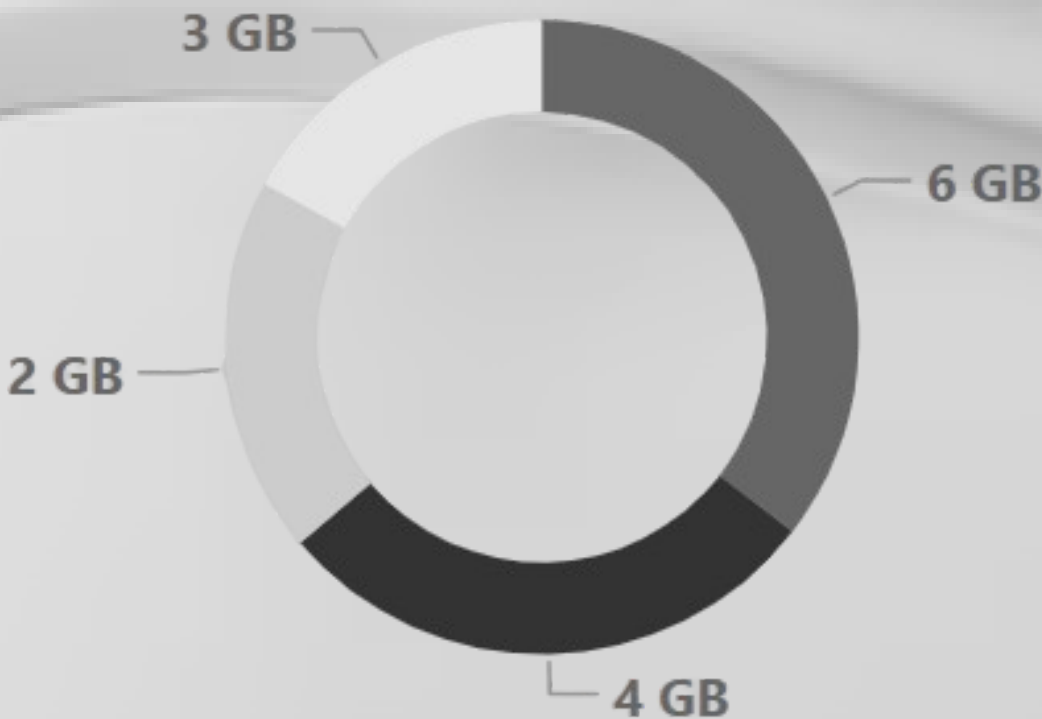
Q 3. What is the average MRP for products in each RAM category?

Products in the 6GB RAM category have the highest average MRP, aligning with their premium position in the market.

```
SELECT
  RAM, Round(AVG(Mrp),0) AS Avg_MRP
FROM
  apple_products
GROUP BY RAM
ORDER BY Avg_MRP DESC;
```

	RAM	Avg_MRP
▶	6 GB	110689
	4 GB	87021
	2 GB	60000
	3 GB	52900

Average MRP By RAM Category

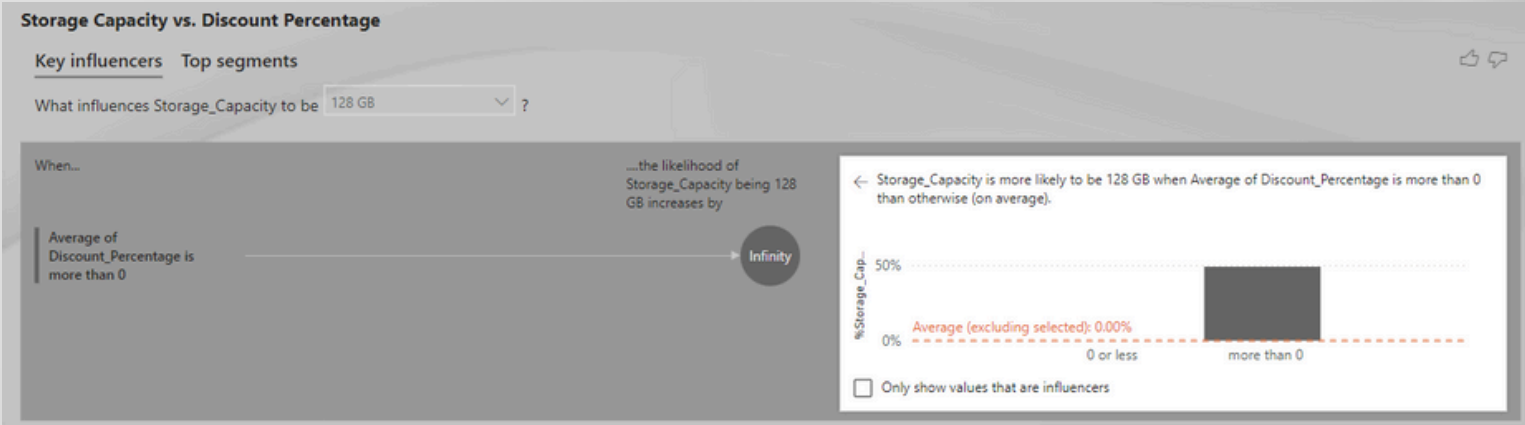


Q 4. What is the relationship between storage capacity and discount percentage?

Products with 64 GB storage capacity receive the highest average discount (16%), followed by 128 GB (12%) and 512 GB (11%). The 256 GB capacity has the lowest average discount (9%), indicating that higher discounts are offered on lower storage variants to boost their sales.

```
SELECT
  TRIM(UPPER(Storage_Capacity)) AS Storage_Capacity,
  CONCAT(ROUND(AVG(CAST(REPLACE(Discount_Percentage, '%', '' )
AS DECIMAL(5, 2))), 0), '%') AS Avg_Discount
FROM
  apple_products
WHERE
  Discount_Percentage IS NOT NULL
  AND Discount_Percentage != ''
  AND TRIM(Storage_Capacity) != ''
GROUP BY TRIM(UPPER(Storage_Capacity))
ORDER BY AVG(CAST(REPLACE(Discount_Percentage, '%', '' ) AS
DECIMAL(5, 2))) DESC;
```

	Storage_Capacity	Avg_Discount
▶	64 GB	16%
	128 GB	12%
	512 GB	11%
	256 GB	9%

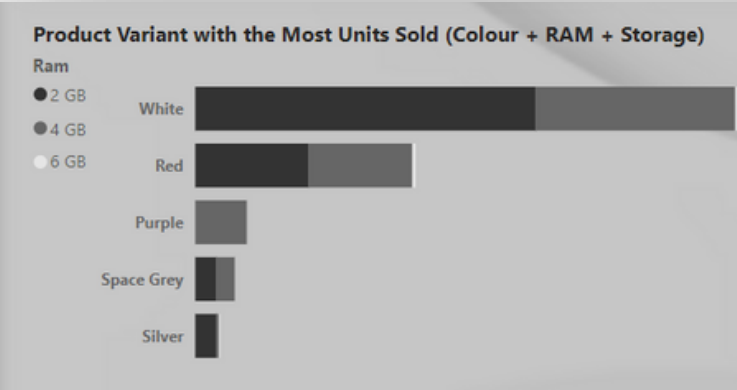


Product Performance

Q 1. Which product variant (colour + RAM + storage) has sold the most units?

The most sold product variant is iPhone SE in Red, Black & White colour with 128GB,64GB,256GB storage and 2GB & 4GB RAM, proving its strong market demand.

```
SELECT
    Product_Name, SUM(Quantity_Sold) AS Total_Sold
FROM
    apple_products
GROUP BY Product_Name
ORDER BY Total_Sold DESC;
```



	A	B	C	D	E
1	Product_Name	Colour	ram	Storage_Capacity	Total_Sold
2	Apple iPhone SE	Red	2 GB	128 GB	9591
3	Apple iPhone SE	Black	2 GB	128 GB	9591
4	Apple iPhone SE	Black	4 GB	64 GB	9591
5	Apple iPhone SE	White	2 GB	256 GB	9591
6	Apple iPhone SE	White	2 GB	64 GB	9591
7	Apple iPhone SE	White	2 GB	128 GB	9591
8	Apple iPhone XR	Coral	4 GB	128 GB	7958
9	Apple iPhone XR		4 GB		7951
10	Apple iPhone XR	Black	4 GB	64 GB	7951
11	Apple iPhone XR	Black	3 GB	128 GB	7951
12	Apple iPhone XR	White	4 GB	128 GB	7951
13	Apple iPhone 11	Red	4 GB	128 GB	4371
14	Apple iPhone 11	White	4 GB	128 GB	4371
15	Apple iPhone 11	Red	4 GB	64 GB	4347
16	Apple iPhone 11	Black	4 GB	64 GB	4347
17	Apple iPhone 11	White	4 GB	64 GB	4347
18	Apple iPhone 11	Purple	4 GB	64 GB	4347
19	Apple iPhone 11	Black	4 GB	128 GB	4347
20	Apple iPhone 8	Space Grey	2 GB	256 GB	1120
21	Apple iPhone 8	Silver	2 GB	256 GB	1120
22	Apple iPhone 8	Gold	2 GB	256 GB	1120
23	Apple iPhone 11 Pro	Midnight Green	4 GB	64 GB	709
24	Apple iPhone 11 Pro	Space Grey	4 GB	512 GB	709
25	Apple iPhone 11 Pro	Midnight Green	4 GB	512 GB	709
26	Apple iPhone 11 Pro	Space Grey	4 GB	256 GB	708
27	Apple iPhone 8 Plus	Space Grey	2 GB	256 GB	343
28	Apple iPhone 8 Plus	Silver	2 GB	256 GB	343
29	Apple iPhone 8 Plus	Silver	2 GB	64 GB	343
30	Apple iPhone 8 Plus	Space Grey	2 GB	64 GB	343
31	Apple iPhone 8 Plus	Gold	2 GB	64 GB	343
32	Apple iPhone 12	Black	6 GB	128 GB	210
33	Apple iPhone 12	Blue	6 GB	128 GB	210
34	Apple iPhone 12	White	6 GB	64 GB	210
35	Apple iPhone 12	Red	6 GB	128 GB	210
36	Apple iPhone 12	White	6 GB	128 GB	210
37	Apple iPhone 12	Green	6 GB	128 GB	209
38	Apple iPhone 12	Black	6 GB	64 GB	209
39	Apple iPhone XS Max	Silver	4 GB	64 GB	145
40	Apple iPhone 11 Pro Max	Gold	4 GB	256 GB	108
41	Apple iPhone 11 Pro Max	Midnight Green	4 GB	64 GB	108
42	Apple iPhone 11 Pro Max	Space Grey	4 GB	64 GB	108
43	Apple iPhone 11 Pro Max	Midnight Green	4 GB	256 GB	108
44	Apple iPhone 11 Pro Max	Gold	4 GB	64 GB	108
45	Apple iPhone 12 Mini	Black	4 GB	64 GB	74
46	Apple iPhone 12 Mini	White	4 GB	64 GB	74
47	Apple iPhone 12 Mini	White	4 GB	128 GB	74
48	Apple iPhone 12 Mini	Red	6 GB	64 GB	74
49	Apple iPhone 12 Mini	Black	4 GB	128 GB	73
50	Apple iPhone 12 Mini	Blue	4 GB	128 GB	73
51	Apple iPhone 12 Pro Max	Graphite	6 GB	128 GB	58
52	Apple iPhone 12 Pro Max	Silver	6 GB	128 GB	58
53	Apple iPhone 12 Pro Max	Gold	6 GB	128 GB	58
54	Apple iPhone 12 Pro Max	Silver	6 GB	256 GB	58
55	Apple iPhone 12 Pro Max	Gold	6 GB	256 GB	58
56	Apple iPhone 12 Pro Max	Graphite	6 GB	256 GB	58
57	Apple iPhone 12 Pro Max	Pacific Blue	6 GB	256 GB	58
58	Apple iPhone 12 Pro Max	Pacific Blue	6 GB	128 GB	58
59	Apple iPhone 12 Pro	Pacific Blue	4 GB	512 GB	55
60	Apple iPhone 12 Pro	Pacific Blue	6 GB	128 GB	55
61	Apple iPhone 12 Pro	Graphite	6 GB	128 GB	55
62	Apple iPhone 12 Pro	Graphite	6 GB	256 GB	55
63	Apple iPhone 12 Pro	Silver	4 GB	512 GB	54

Q 2. What is the most popular colour for each price category?

The most popular colour across all price categories is Space Grey, showcasing customer preference for neutral and classic shades.

```
SELECT
  a.Price_Category,
  a.Colour,
  SUM(a.Quantity_Sold) AS Total_Sold
FROM apple_products a
WHERE a.Colour = (
  SELECT b.Colour
  FROM apple_products b
  WHERE b.Price_Category = a.Price_Category
  GROUP BY b.Colour
  ORDER BY SUM(b.Quantity_Sold) DESC, b.Colour ASC
  LIMIT 1
)
GROUP BY a.Price_Category, a.Colour;
```

	Price_Category	Colour	Total_Sold
▶	High	Space Grey	2988
	Medium	White	35915
	Low	Black	9591

Most Popular Colour by Price Category		
Colour	Price_Category	Quantity_Sold
White	Medium	35915
Black	Medium	34261
Red	Medium	18383
Black	Low	9591
White	Low	9581
Coral	Medium	7958
	Medium	7951
Purple	Medium	4347
Space Grey	High	2988
Silver	High	1778
Midnight Green	High	1634
Gold	High	1452
White	High	494
Black	High	492
Gold	Medium	343
Silver	Medium	343
Space Grey	Medium	343
Blue	High	283
Graphite	High	226
Pacific Blue	High	226
Red	High	210
Green	High	209

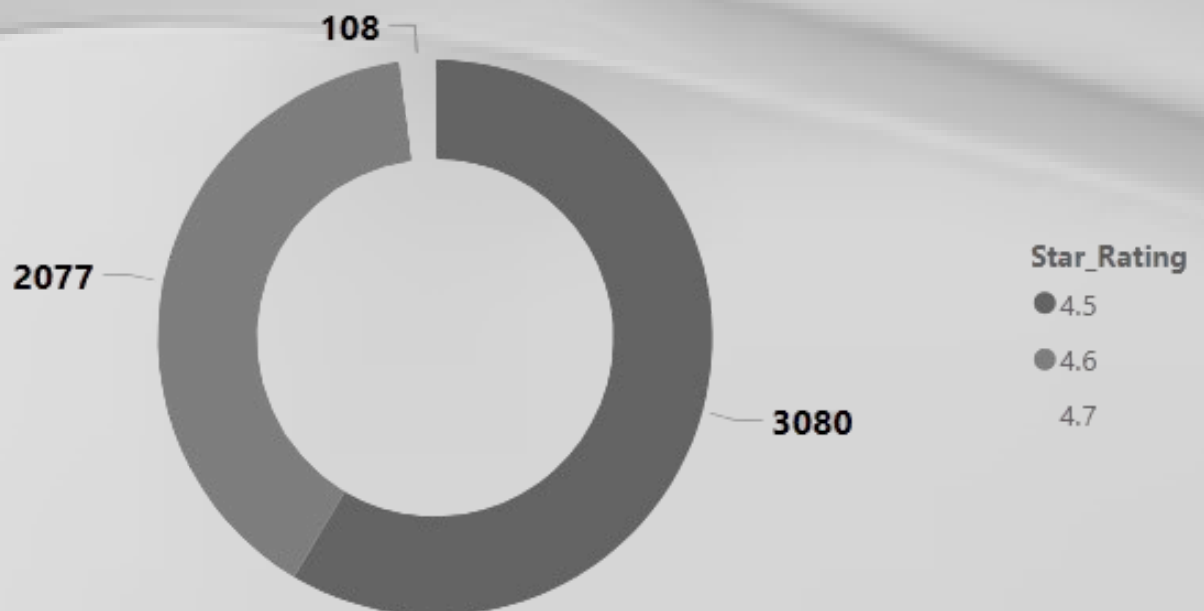
Q 3. What is the average quantity sold for products in each star rating range?

The products with a Star Rating of 4.5 have the highest average quantity sold (3,080 units). This suggests that products with solid customer satisfaction, even if not perfect, drive higher sales volume.

```
SELECT
  Star_Rating, Round(AVG(Quantity_Sold),0) AS
  Avg_Quantity_Sold
FROM
  apple_products
GROUP BY Star_Rating
ORDER BY Star_Rating ASC;
```

	Star_Rating	Avg_Quantity_Sold
▶	4.5	3080
	4.6	2077
	4.7	108

Average Quantity Sold by Star Rating



This data analysis project focused on understanding key patterns and insights from the iPhone sales data, which includes details about product characteristics, sales performance, customer engagement, and pricing strategies. The goal was to uncover trends, identify high-performing products, and gain actionable insights that can drive business decisions.

Key Insights:

Sales and Revenue Trends:

- The analysis revealed that certain price categories contribute significantly to the overall revenue, with premium products driving higher sales volumes and revenue.
- The highest revenue-generating products were identified, with a clear distinction between the most successful models and others in terms of total revenue and quantity sold.
- The average sale price across storage capacities was also calculated, helping to understand how different storage capacities correlate with price points and overall product success.

Customer Engagement Analysis:

- Customer engagement, measured through ratings and reviews, was found to be directly linked to product success. The product with the highest engagement showed a strong correlation between positive reviews and higher sales.
- Analyzing the RAM category in relation to customer engagement showed that certain configurations received more attention, providing insights into customer preferences for higher RAM variants.

Pricing and Discount Insights:

- The analysis of discount percentages highlighted the most discounted products, revealing that offering higher discounts often led to increased sales, particularly for specific price categories.
- Discount amounts were found to significantly affect the sale price, providing insights into pricing strategies that could optimize revenue.
- The relationship between storage capacity and discount percentage also uncovered important patterns in pricing strategies, suggesting that products with higher storage tend to have lower discount percentages but command higher prices.

Product Performance:

- The most successful product variants (defined by combinations of colour, RAM, and storage) were identified, which helps in future inventory planning and marketing strategies.
- The most popular colours for each price category were also highlighted, allowing for more targeted marketing based on customer preferences.
- Additionally, quantity sold was correlated with star rating ranges, showing that higher-rated products tended to sell in larger quantities.

Advanced Insights:

- The revenue contribution by RAM category showed a clear preference for higher RAM models, which contributed more to total revenue.
- The analysis of average revenue per unit sold revealed the pricing strategies that led to the highest profitability, with premium products typically offering the best returns.

Final Thoughts:

This analysis not only provides valuable insights into the sales performance, customer engagement, and pricing strategies of iPhone products but also offers a comprehensive view of how each variable—such as storage capacity, RAM, price category, and customer ratings—affects sales and revenue.

By applying these insights, businesses can optimize their product offerings, marketing strategies, and pricing models to better align with customer preferences and drive higher revenue.

Moving forward, it is recommended that businesses focus on high-performance products with strong customer engagement and strategically use discounts to drive sales while maintaining profitability.

Additionally, leveraging the insights on storage and RAM preferences can help in better targeting the right audience and improving overall sales performance.

This project has provided a solid foundation for making data-driven decisions in product strategy, customer engagement, and sales optimization for iPhone products.



Thank You!!