DATA
ANALYSIS

SQL PROJECT E-COMMERCE ANALYTICS

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BACKGROUND OF DATASET

TheLook is a fictitious eCommerce clothing site developed by the Looker team. The dataset contains information about customers, products, orders, logistics, web events and digital marketing campaigns. The contents of this dataset are synthetic, and are provided to industry practitioners for the purpose of product discovery, testing, and evaluation.

01

YEARLY SALES TREND

#QUERY 1

```
SELECT
 FORMAT_TIMESTAMP('%Y', created_at) AS Year,
 SUM(num_of_item) AS total_order
FROM
 bigquery-public-
data.thelook_ecommerce.orders
GROUP BY
 Year
ORDER BY
 Year
```

Row	Year	total_order
1	2019	4269
2	2020	14781
3	2021	29030
4	2022	53067
5	2023	79621

#QUERY 1

• The company has experienced consistent growth in sales over the past five years. Sales increased from 4,000 units in 2019 to 79,000 units in 2023. This upward trend indicates a healthy and expanding customer base.
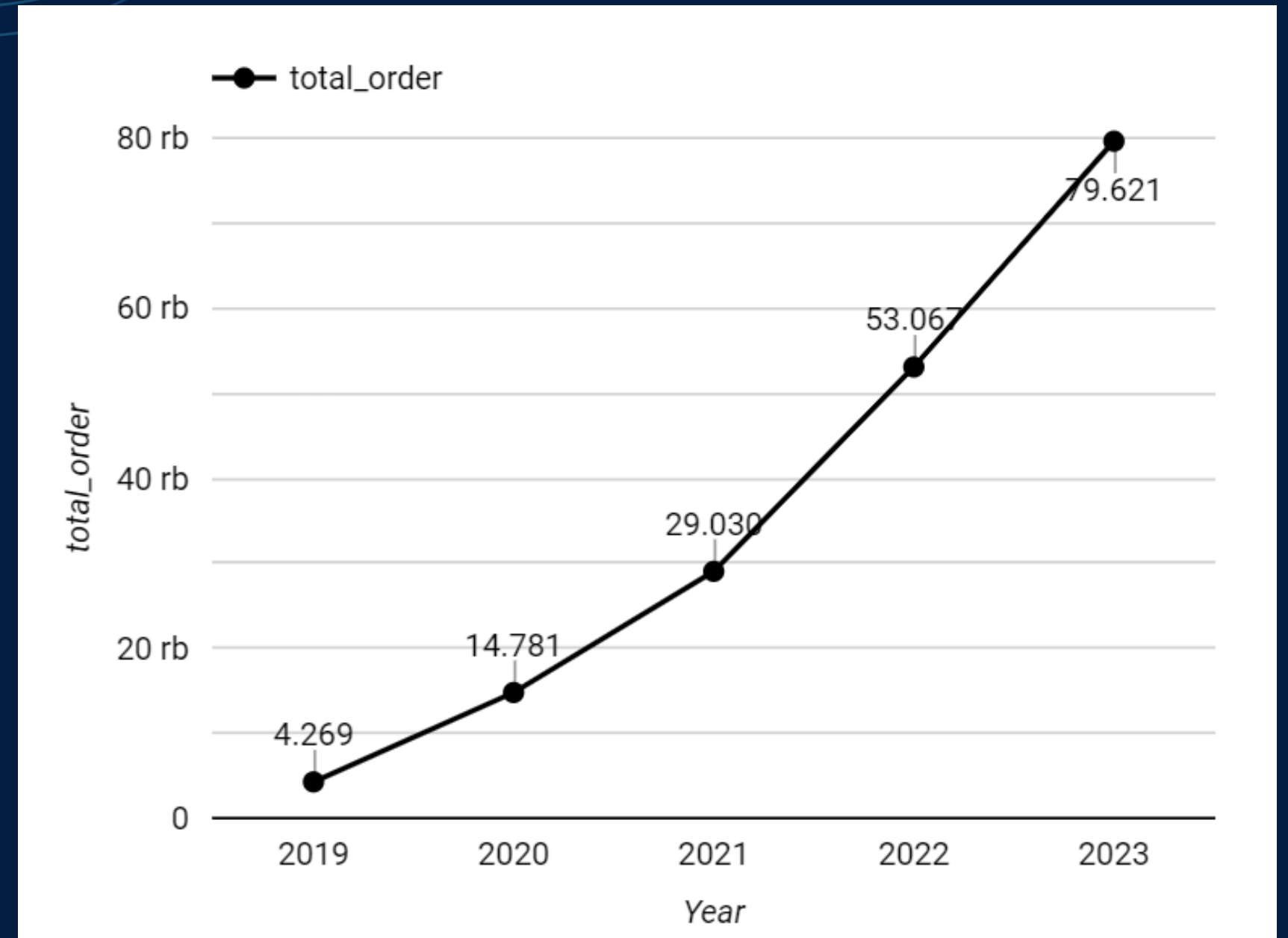
02

# Customer Segmentation Patterns Based on Gender and Age

#QUERY 2

Row	age_segment	gender	total_order
1	18-30	F	13595
2	18-30	M	13657
3	31-45	F	15907
4	31-45	M	15983
5	Above 45	F	26699
6	Above 45	M	26675
7	Under 18	F	6315
8	Under 18	M	6080

```sql
SELECT
  CASE
    WHEN U.age < 18 THEN 'Under 18'
    WHEN U.age BETWEEN 18 AND 30 THEN '18-30'
    WHEN U.age BETWEEN 31 AND 45 THEN '31-45'
    ELSE 'Above 45'
  END AS age_segment,
  U.gender,
  COUNT(O.num_of_item) AS total_order
FROM
  bigquery-public-data.thelook_ecommerce.users U
LEFT JOIN
  bigquery-public-data.thelook_ecommerce.orders O
ON
  U.id = O.user_id
GROUP BY
  age_segment, U.gender
ORDER BY
  age_segment, U.gender;
```

- The customer base appears to be evenly split, with approximately 50% of customers identifying as female and the other 50% as male. This gender balance suggests that the company has effectively attracted a diverse range of customers, creating opportunities for targeted marketing strategies tailored to the preferences and needs of both genders.
- It also highlights the importance of ensuring that products and marketing campaigns are inclusive and appealing to a broad audience.
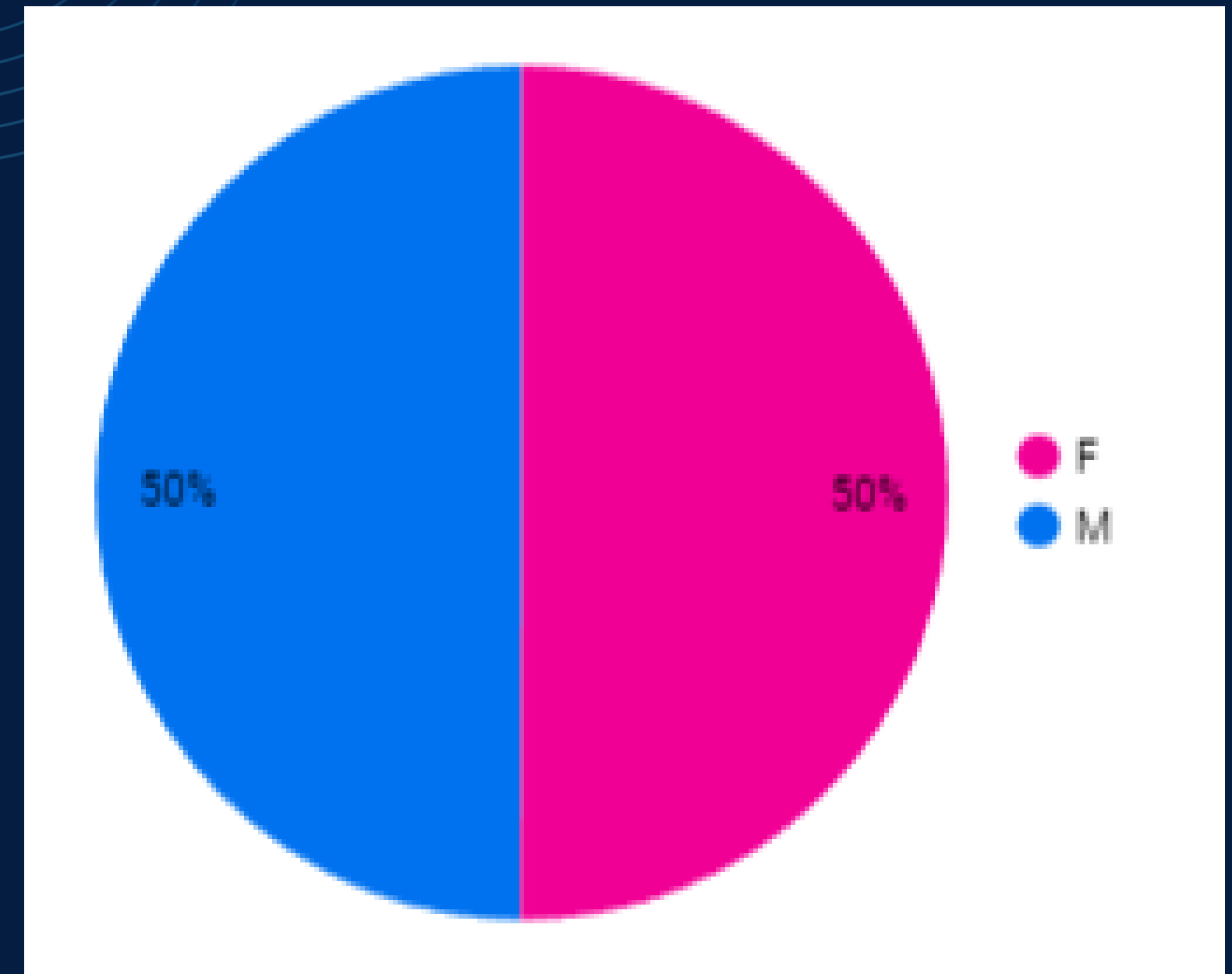
- Both genders show similar distribution across age groups, with a substantial number falling into the "above 45" category. Indicating a significant portion of mature customers.
- The "under 18" age group has the smallest customer base for both males and females. There's potential for campaigns targeting younger customers, such as student discounts or youth-oriented products.
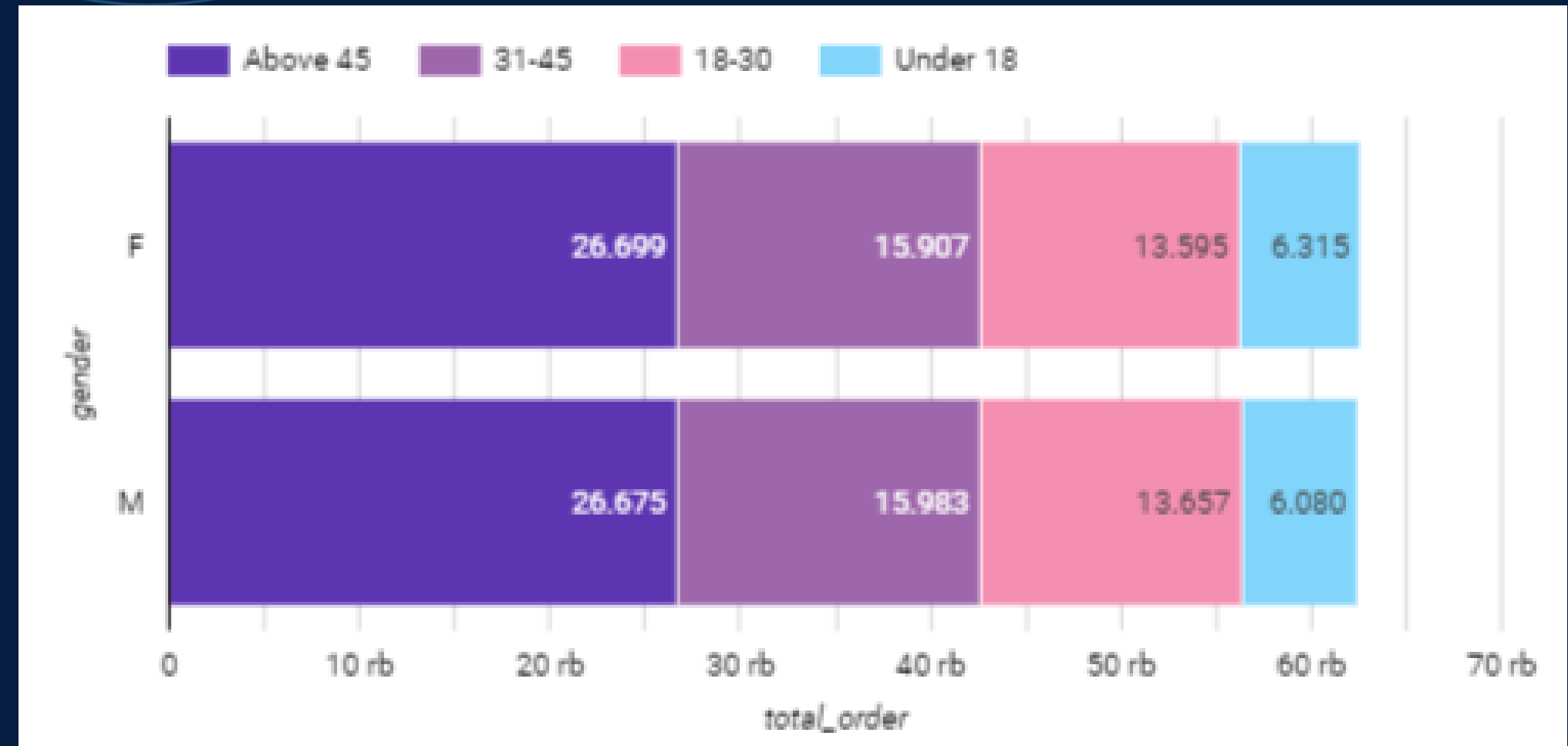
O3

Identifying Loyal Customers

#QUERY 3

```sql
SELECT
  U.first_name,
  U.last_name,
  U.email,
  COUNT(O.order_id) AS total_orders,
  SUM(O.num_of_item) AS total_items_purchased
FROM
  bigquery-public-data.thelook_ecommerce.users U
JOIN
  bigquery-public-data.thelook_ecommerce.orders O
ON
  U.id = O.user_id
GROUP BY
  U.first_name,
  U.last_name,
  U.email
HAVING
  total_orders >= ORDER BY
  total_orders DESC
LIMIT 5;
```

Row	first_name	last_name	email	total_orders	total_items_purchase
1	James	Smith	jamessmith@example.com	28	35
2	Michael	Smith	michaelsmith@example.com	24	29
3	David	Johnson	davidjohnson@example.org	24	33
4	Michael	Williams	michaelwilliams@example.org	22	28
5	William	Smith	williamsmith@example.net	21	26

- These five customers exhibit exceptional loyalty with high total orders and total items purchased.
- To retain these customers, focus on building strong relationships and exceptional customer service.
- Consider exclusive offers to enhance loyalty and encourage repeat purchases.

04
Customer Traffic Sources

#QUERY 4

```sql
SELECT
  traffic_source,
  COUNT(DISTINCT id) AS total_customer
FROM
  bigquery-public-data.thelook_ecommerce.users
GROUP BY
  traffic_source
```

Row	traffic_source	total_customer
1	Search	70050
2	Organic	15032
3	Facebook	6002
4	Email	4973
5	Display	3943

#QUERY 4

- Search (70.1%): The majority of customers discover us through online searches, showcasing the strong online presence.
- Organic (15%): Organic traffic indicates that the website content is resonating well with search engines, leading to natural, unpaid discovery by users.
- Facebook (6%): Facebook marketing efforts are effective, contributing to a notable portion of our customer base.
- Email (5%): Email campaigns play a role in customer acquisition, engaging a portion of the audience effectively.
- Display (3.9%): Display ads are reaching potential customers, though they represent a smaller share of the audience.
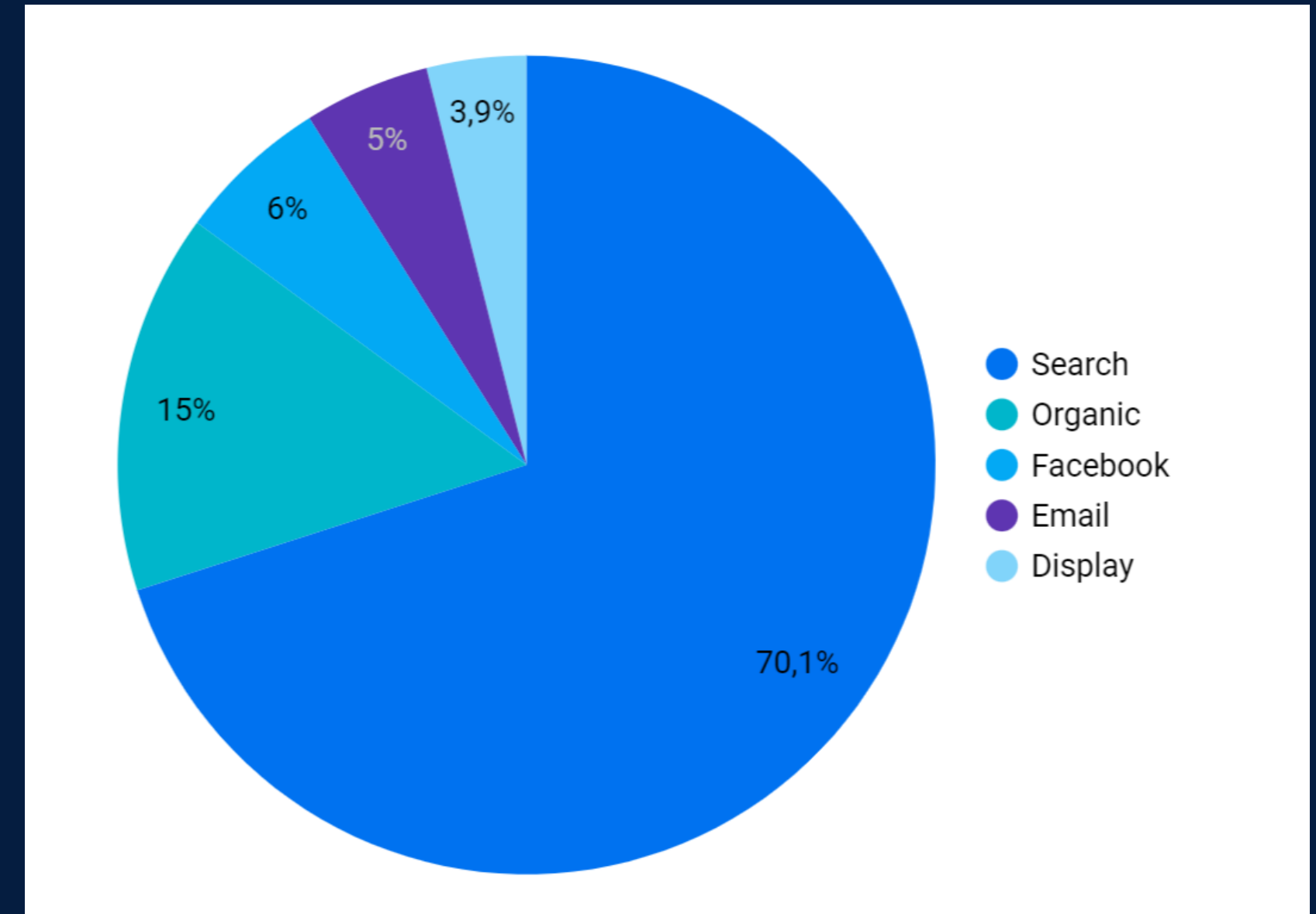
05

Profit-margin of Each Products

#QUERY 5

```sql
SELECT
    name AS Product,
    retail_price Price,
    cost Cost,
    (retail_price - cost) AS Profit_Margin
FROM
    bigquery-public-data.thelook_ecommerce.products
ORDER BY
    profit_margin DESC;
```

- One standout product is "Darla," which has the highest profit margin among all products.
- Focusing on products with high profit margins like "Darla" can be a sound strategy to enhance business profitability since these products can generate more profit per unit sold. By concentrating on these products, a company can plan more effective marketing and sales strategies to boost overall sales and profits.

Row	Product	Price	Cost	Profit_Margin
1	Darla	999.0	404.5950011909...	594.4049988090...
2	Nobis Yatesy Parka	950.0	381.9000024348...	568.0999975651...
3	The North Face Apex Bionic So...	903.0	363.0060023143...	539.9939976856...
4	The North Face Nuptse 2 Jack...	903.0	367.5210013724...	535.4789986275...
5	The North Face Freedom Mens...	903.0	369.3270016685...	533.6729983314...
6	JORDAN DURASHEEN SHORT ...	903.0	370.2300018165...	532.7699981834...
7	The North Face Nuptse 2 Jack...	903.0	370.2300018165...	532.7699981834...
8	ASCIS Cushion Low Socks (Pa...	903.0	373.8420015675...	529.1579984324...

Insights

Sales Growth

The company achieved consistent sales growth over five years, increasing from 4,000 units in 2019 to 79,000 units in 2023.

Gender Diversity

The customer base is evenly split, with 50% female and 50% male customers, creating opportunities for tailored marketing strategies.

Age Distribution

Both genders are distributed similarly across age groups, with a notable mature customer segment. Targeting younger customers could be explored.

Loyal Customers

Five customers exhibit exceptional loyalty with high total orders and items purchased. Focus on relationship-building and exclusive offers to retain them.

Traffic Sources

Online searches (70.1%) dominate customer discovery, followed by organic (15%), Facebook (6%), email (5%), and display (3.9%). Strengthen online presence and engage effectively with various channels.

Profitable Product

"Darla" stands out with the highest profit margin. Focusing on high-margin products can boost overall profitability through effective marketing and sales strategies.

Actionable Strategies

Sales Growth

Continue to invest in marketing and product development to sustain and accelerate sales growth. Set annual sales targets and closely monitor progress.

Develop gender-specific marketing campaigns to better resonate with both male and female customers. Gather customer feedback to tailor products and promotions accordingly.

Gender Diversity

Age Distribution

Create targeted marketing campaigns for the mature customer segment while exploring opportunities to attract younger customers. Consider introducing student discounts or youth-focused products.

Establish a loyalty program offering exclusive discounts, early access to products, or personalized recommendations. Foster strong customer relationships through exceptional service.

Loyal Customers

Traffic Sources

Allocate marketing budgets effectively, emphasizing online search optimization. Enhance content for organic discovery, fine-tune Facebook ads, optimize email campaigns, and maximize the impact of display advertising.

Leverage the success of "Darla" by promoting it as a flagship product. Explore cross-selling opportunities with other high-margin items and analyze customer behavior around this product for upselling tactics.

Profitable Product

OUR TEAM

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Thank's For Watching

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