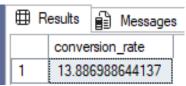# MARKETING SQL QUERIES

A. KPIs-
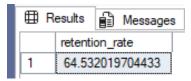
1. Conversion Rate

```sql
SELECT
    COUNT(DISTINCT CASE WHEN converted = 1 AND user_id IS NOT NULL THEN user_id
    END) * 100.0 /
    COUNT(DISTINCT CASE WHEN user_id IS NOT NULL THEN user_id END) AS
conversion_rate
    FROM marketing;
```

	conversion_rate
1	13.886988644137

2. Retention Rate (among converted users)

```sql
SELECT
    COUNT(DISTINCT CASE WHEN converted = 1 AND is_retained = 1 AND user_id IS
NOT    NULL THEN user_id END) * 100.0 /
  COUNT(DISTINCT CASE WHEN converted = 1 AND user_id IS NOT NULL THEN user_id
END) AS retention_rate
    FROM marketing;
```

	retention_rate
1	64.532019704433

3. Channel Performance

```sql
SELECT
    marketing_channel,
    COUNT(DISTINCT CASE WHEN converted = 1 AND user_id IS NOT NULL THEN user_id
END) * 100.0 /
    COUNT(DISTINCT CASE WHEN user_id IS NOT NULL THEN user_id END) AS
    conversion_rate,
    COUNT(DISTINCT CASE WHEN converted = 1 AND is_retained = 1 AND user_id IS
    NOT NULL THEN user_id END) * 100.0 /
    COUNT(DISTINCT CASE WHEN converted = 1 AND user_id IS NOT NULL THEN user_id
    END) AS retention_rate
FROM marketing
WHERE marketing_channel IS NOT NULL
GROUP BY marketing_channel;
```
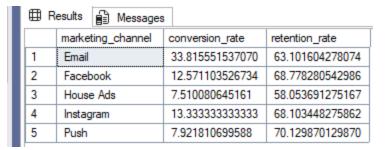
	marketing_channel	conversion_rate	retention_rate
1	Email	33.815551537070	63.101604278074
2	Facebook	12.571103526734	68.778280542986
3	House Ads	7.510080645161	58.053691275167
4	Instagram	13.333333333333	68.103448275862
5	Push	7.921810699588	70.129870129870

4. Variant Impact (Control vs Personalization)

```sql
SELECT
  variant,
  COUNT(DISTINCT CASE WHEN converted = 1 AND user_id IS NOT NULL THEN user_id
END) * 100.0 /
    COUNT(DISTINCT CASE WHEN user_id IS NOT NULL THEN user_id END) AS
conversion_rate,
  COUNT(DISTINCT CASE WHEN converted = 1 AND is_retained = 1 AND user_id IS
NOT NULL THEN user_id END) * 100.0 /
    COUNT(DISTINCT CASE WHEN converted = 1 AND user_id IS NOT NULL THEN
user_id END) AS retention_rate
FROM marketing
WHERE variant IS NOT NULL
GROUP BY variant;
```
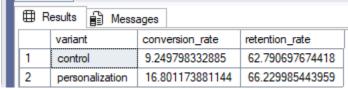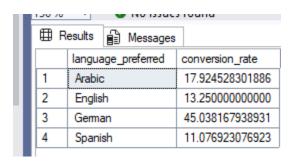
	variant	conversion_rate	retention_rate
1	control	9.249798332885	62.790697674418
2	personalization	16.801173881144	66.229985443959

5. Language Conversion Trends

```sql
SELECT
  language_preferred,
  COUNT(DISTINCT CASE WHEN converted = 1 AND user_id IS NOT NULL THEN user_id
END) * 100.0 /
    COUNT(DISTINCT CASE WHEN user_id IS NOT NULL THEN user_id END) AS
conversion_rate
FROM marketing
WHERE language_preferred IS NOT NULL
GROUP BY language_preferred;
```

	language_preferred	conversion_rate
1	Arabic	17.924528301886
2	English	13.250000000000
3	German	45.038167938931
4	Spanish	11.076923076923

6. Age Group Conversion Trends

```sql
SELECT
    age_group,
    COUNT(DISTINCT CASE WHEN converted = 1 AND user_id IS NOT NULL THEN user_id
END) * 100.0 /
        COUNT(DISTINCT CASE WHEN user_id IS NOT NULL THEN user_id END) AS
conversion_rate
FROM marketing
WHERE age_group IS NOT NULL
GROUP BY age_group;
```

	age_group	conversion_rate
1	19-24 years	23.182861514919
2	45-55 years	7.088846880907
3	55+ years	7.747196738022
4	0-18 years	15.894039735099
5	36-45 years	6.994328922495
6	30-36 years	7.271010387157
7	24-30 years	18.688524590163

B. Insights to Look For

Which marketing channel has the highest conversion and retention rates?

```sql
SELECT
 marketing_channel,
 COUNT(DISTINCT CASE WHEN converted = 1 THEN user_id END) * 100.0 /
  COUNT(DISTINCT user_id) AS conversion_rate,
 COUNT(DISTINCT CASE WHEN converted = 1 AND is_retained = 1 THEN user_id END) * 100.0 /
  COUNT(DISTINCT CASE WHEN converted = 1 THEN user_id END) AS retention_rate
FROM marketing
WHERE marketing_channel IS NOT NULL
GROUP BY marketing_channel
ORDER BY conversion_rate DESC, retention_rate DESC;
```

	marketing_channel	conversion_rate	retention_rate
1	Email	33.815551537070	63.101604278074
2	Instagram	13.333333333333	68.103448275862
3	Facebook	12.571103526734	68.778280542986
4	Push	7.921810699588	70.129870129870
5	House Ads	7.510080645161	58.053691275167

2. Is the personalization variant more effective than control?

```
SELECT
 variant,
 COUNT(DISTINCT CASE WHEN converted = 1 THEN user_id END) * 100.0 /
  COUNT(DISTINCT user_id) AS conversion_rate,
 COUNT(DISTINCT CASE WHEN converted = 1 AND is_retained = 1 THEN user_id END) * 100.0 /
  COUNT(DISTINCT CASE WHEN converted = 1 THEN user_id END) AS retention_rate
FROM marketing
WHERE variant IS NOT NULL
GROUP BY variant
ORDER BY conversion_rate DESC;
```
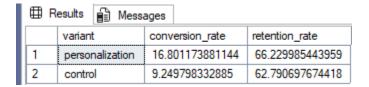
	variant	conversion_rate	retention_rate
1	personalization	16.801173881144	66.229985443959
2	control	9.249798332885	62.790697674418

3. Are certain age groups or languages more likely to convert or stay retained?

a) By Age Group:

```
SELECT
 age_group,
 COUNT(DISTINCT CASE WHEN converted = 1 THEN user_id END) * 100.0 /
  COUNT(DISTINCT user_id) AS conversion_rate,
 COUNT(DISTINCT CASE WHEN converted = 1 AND is_retained = 1 THEN user_id END) * 100.0 /
  COUNT(DISTINCT CASE WHEN converted = 1 THEN user_id END) AS retention_rate
FROM marketing
WHERE age_group IS NOT NULL
GROUP BY age_group
ORDER BY conversion_rate DESC;
```

	age_group	conversion_rate	retention_rate
1	19-24 years	23.182861514919	68.976897689768
2	24-30 years	18.688524590163	67.105263157894
3	0-18 years	15.894039735099	64.583333333333
4	55+ years	7.747196738022	67.105263157894
5	30-36 years	7.271010387157	59.740259740259
6	45-55 years	7.088846880907	54.666666666666
7	36-45 years	6.994328922495	55.405405405405

b) By Language Preferred:

```
SELECT
  language_preferred,
  COUNT(DISTINCT CASE WHEN converted = 1 THEN user_id END) * 100.0 /
    COUNT(DISTINCT user_id) AS conversion_rate,
  COUNT(DISTINCT CASE WHEN converted = 1 AND is_retained = 1 THEN user_id END) * 100.0 /
    COUNT(DISTINCT CASE WHEN converted = 1 THEN user_id END) AS retention_rate
FROM marketing
WHERE language_preferred IS NOT NULL
GROUP BY language_preferred
ORDER BY conversion_rate DESC;
```
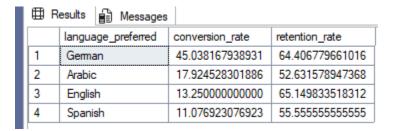
⊞ Results | 📄 Messages

	language_preferred	conversion_rate	retention_rate
1	German	45.038167938931	64.406779661016
2	Arabic	17.924528301886	52.631578947368
3	English	13.250000000000	65.149833518312
4	Spanish	11.076923076923	55.555555555555

4. What is the subscription funnel from served → converted → retained?

```
SELECT
  COUNT(DISTINCT user_id) AS total_served,
  COUNT(DISTINCT CASE WHEN converted = 1 THEN user_id END) AS total_converted,
  COUNT(DISTINCT CASE WHEN converted = 1 AND is_retained = 1 THEN user_id END) AS
total_retained
FROM marketing;
```

⊞ Results | 📄 Messages

	total_served	total_converted	total_retained
1	7309	1015	655