Markelytics Project– SQL Queries

Tool Used – PostgreSQL

Chirag Sharma

Data Analyst

```
--- 1.  Find the total revenue generated from each campaign.

select cm.campaign_name, sum(cn.revenue) as Revenue
from campaign as cm
join conversions as cn
ON cm.campaign_id = cn.compaignid
group by 1
order by 2 desc
```

	campaign_name text	revenue numeric
1	Winter Fitness Kickstart	112795
2	Refer & Earn Campaign	107451
3	Summer Splash Sale	106010
4	Buy 1 Get 1 ?? Festive Bonanza	100690
5	Black Friday Early Access	78486
6	Back to School Essentials	70558
7	Limited Time Tech Promo	51658
8	Flash Deal Friday	50001

```sql
--- 2.  Identify the top 5 products by conversion revenue.

select p.product_name, sum(cn.revenue) as Revenue
from conversions as cn
join products as p
ON cn.productid = p.productid
group by 1
order by 2 desc
limit 5
```

Data Output   Messages   Notifications

	product_name text	revenue numeric
1	Titan Hard Drive	69988
2	Echo Smart Home Hub	67618
3	Galaxy Soundbar	66326
4	Omni VR Headset	58514
5	Solar Powerbank	55085

Query Query History

```sql
--- 3.  Calculate the ad spend per campaign and compare it against its allocated budget.
--- filter the campaign that exceed their allocated busget

select * from
(select cm.campaign_name, round(sum(mp.ad_spend)::numeric,0) as Ad_spend, max(cm.budget) as Budget
from marketingperformance as mp
join campaign as cm
ON mp.campaign_id = cm.campaign_id
group by 1) as o
where ad_spend > budget
```

Data Output   Messages   Notifications

	campaign_name text	ad_spend numeric	budget bigint
1	Black Friday Early Access	328	300
2	New Arrival: Smart Gadgets	1218	750
3	Winter Fitness Kickstart	383	250
4	Year-End Clearance	1216	1150

```
1    --- 4.  List all customers who made a purchase conversion and the total revenue they generated.
2
3 v  select c.customer_name, sum(cn.revenue) as Revenue from conversions as cn
4    join customer as c
5    ON cn.customerid = c.customer_id
6    group by 1
7
8    --- 86 customers sucessufluly converted.
9
10
11
```

Data Output   Messages   Notificatio

	customer_name text	revenue numeric
1	Aidan Hansen	20742
2	Paisley Palacios	920
3	Taylor Massey	329
4	Malakai Andersen	17236
5	Alexandra Leach	10612
6	Hayden Winters	3504
7	Eugene Webster	340
8	Audrey Vargas	2385

```sql
--- 5.   Find the conversion rate for each campaign.

--- Marketing Table
with marketing  as (
select campaign_id, sum(case when status = 'Clicks' then 1 else 0 end) as Clicks
from marketingperformance
group by 1
order by 1
),

--- Conversion Table
conversion_table as (
select campaign_id, count(*) as Conversions
from conversions
group by 1
order by 1
)

--- Final Table
select *, round(conversions * 100.0/clicks) || '%' as Conversion_rate from
(select cm.campaign_name, mm.Clicks, cn.conversions
from campaign as cm
join marketing as mm
ON cm.campaign_id = mm.campaign_id
join conversion_table as cn
ON cm.campaign_id = cn.campaign_id)
order by 4 desc
```

Data Output   Messages   Notifications

	campaign_name text	clicks bigint	conversions bigint	conversion_rate text
1	Buy 1 Get 1 ?? Festive Bonanza	287	22	8%
2	Black Friday Early Access	268	20	7%
3	Back to School Essentials	246	17	7%
4	Winter Fitness Kickstart	309	20	6%
5	Refer & Earn Campaign	324	19	6%
6	Flash Deal Friday	266	12	5%
7	Limited Time Tech Promo	295	10	3%
8	Summer Splash Sale	1039	15	1%

```sql
1    --- 6.  Identify which age group contributed the most revenue from conversions.
2
3 ∨  select c.age_group, sum(cn.revenue) as revenue
4    from customer as c
5    join conversions as cn
6    ON c.customer_id = cn.customerid
7    group by 1
8    order by 2 desc
9    limit 1
10
```

Data Output   Messages   Notifications

	age_group text	revenue numeric
1	45-54	147261

```sql
--- 7.  Find the total number of impressions, clicks, and signups per campaign.

--- SignUp Table
with signups as (
select campaign_id, count(*) as SignUp
from conversions
where conversiontype = 'SignUp'
group by 1
order by 1
),

--- Marketing Table

impressions_clicks as (
select campaign_id, sum(case when status = 'Impressions' then 1 else 0 end) as impressions,
sum(case when status = 'Clicks' then 1 else 0 end) as Clicks
from marketingperformance
group by 1
order by 1
)

--- Per Campaigns
select cm.campaign_name, ic.impressions, ic.Clicks, s.Signup
from campaign as cm
join impressions_clicks as ic
ON cm.campaign_id = ic.campaign_id
join signups as s
ON cm.campaign_id = s.campaign_id
```

	campaign_name text	impressions bigint	clicks bigint	signup bigint
1	Summer Splash Sale	18888	1039	5
2	New Arrival: Smart Gadgets	19172	985	4
3	Year-End Clearance	18949	981	5
4	Flash Deal Friday	5401	266	8
5	Refer & Earn Campaign	5458	324	9
6	Limited Time Tech Promo	5495	295	6
7	Winter Fitness Kickstart	5430	309	5
8	Back to School Essentials	5436	246	10
9	Black Friday Early Access	5386	268	12
10	Buy 1 Get 1 ?? Festive Bonanza	5385	287	9

```
1    --- 8.   Determine which city generated the highest conversion revenue.
2
3 v  select c.city, sum(cn.revenue)
4    from customer as c
5    join conversions as cn
6    ON c.customer_id = cn.customerid
7    group by 1
8    order by 2 desc
9    limit 1
```

Data Output   Messages

	city text	sum numeric
1	Jaipur	70152

```sql
--- 9.  Show the return on ad spend (ROAS) for each campaign (Revenue ÷ Ad_Spend

--- Ad_Spend Table

with ad_spend AS (
select campaign_id, round(sum(ad_spend)::numeric, 1) as spend
from marketingperformance
group by 1
),

--- Revenue Table

revenue as (
select campaign_id, sum(revenue) as Revenue
from conversions
group by 1
)

--- ROAS per Campaign

select *, round(revenue/spend,0) as ROAS from
(select cm.campaign_name, ad.spend, r.Revenue
from campaign as cm
join ad_spend as ad
ON cm.campaign_id = ad.campaign_id
join revenue as r
ON cm.campaign_id = r.campaign_id
)
```

	campaign_name text	spend numeric	revenue numeric	roas numeric
1	Summer Splash Sale	1258.3	106010	84
2	New Arrival: Smart Gadgets	1218.0	30052	25
3	Year-End Clearance	1216.0	43461	36
4	Flash Deal Friday	333.8	50001	150
5	Refer & Earn Campaign	394.5	107451	272
6	Limited Time Tech Promo	369.7	51658	140
7	Winter Fitness Kickstart	383.3	112795	294
8	Back to School Essentials	307.6	70558	229
9	Black Friday Early Access	328.2	78486	239
10	Buy 1 Get 1 ?? Festive Bonanza	357.8	100690	281

```sql
1    --- 10. Identify the product color that brought in the highest sales revenue.
2
3 ⌄  select p.color, sum(c.revenue) as Revenue from products as p
4    join conversions as c
5    ON p.productid = c.productid
6    group by 1
7    order by 2 desc
8    limit 1
```

Data Output   Messages   Not

	color text 🔒	revenue numeric 🔒
1	Red	307501

```sql
1    --- 11. List the top 3 customers by lifetime revenue (FactConversion).
2
3 v  select c.customer_name, sum(cn.revenue) as revenue from customer as c
4    join conversions as cn
5    ON c.customer_id = cn.customerid
6    group by 1
7    order by 2 desc
8    limit 3
```

Data Output   **Messages**   **Notifications**

	customer_name text	revenue numeric
1	Archer Allison	37726
2	Tucker McGuire	31063
3	Jonas Robbins	27767

```
1    --- 12. Calculate the average revenue per purchase grouped by region.
2
3 ∨  select c.region, round(avg(cn.revenue),1) as revenue from customer as c
4    join conversions as cn
5    ON c.customer_id = cn.customerid
6    group by 1
7    order by 1
```

Data Output   Messages   Noti

	region text	revenue numeric
1	East	4223.5
2	North	6342.6
3	South	5050.7
4	West	5595.0

```sql
--- 13. Compare impressions vs. actual conversions for each campaign to check effectiveness.

--- Impression Table

with impressionsTable AS (
select campaign_id, count(*) as Impressions
from marketingperformance
where status = 'Impressions'
group by 1
order by 1
),

--- Conversion Table

ConversionTable as (
select campaign_id, count(*) as Conversions
from conversions
group by 1
)

--- Campaign Wise
select cm.campaign_name, im.impressions, cn.conversions from
campaign as cm
join impressionsTable as im
ON cm.campaign_id = im.campaign_id
join conversionTable as cn
ON cm.campaign_id = cn.campaign_id
```

	campaign_name text	impressions bigint	conversions bigint
1	Summer Splash Sale	18888	15
2	New Arrival: Smart Gadgets	19172	7
3	Year-End Clearance	18949	8
4	Flash Deal Friday	5401	12
5	Refer & Earn Campaign	5458	19
6	Limited Time Tech Promo	5495	10
7	Winter Fitness Kickstart	5430	20
8	Back to School Essentials	5436	17
9	Black Friday Early Access	5386	20

```sql
1    --- 14. Identify the campaign objective (Sales, Brand Awareness, Lead Generation, etc.) that generated the highest total revenue.
2
3    select cm.objective, sum(cn.revenue) as Revenue
4    from campaign as cm
5    join conversions as cn
6    ON cm.campaign_id = cn.campaign_id
7    group by 1
8    order by 2 desc
9    limit 1
```

	objective text	revenue numeric
1	Sales	262266

```
1    --- 15. Find the top 5 customers by number of conversions (not revenue), to highlight loyalty/engagement.
2
3  v select c.customer_name, count(cn.*) as Conversions
4    from customer as c
5    join conversions as cn
6    ON c.customer_id = cn.customerid
7    group by 1
8    order by 2 desc
9    limit 5
10
```

	customer_name 🔒 text	conversions 🔒 bigint
1	Caden Ford	5
2	Melany Liu	4
3	Stephen Roberts	4
4	Finley Hurley	3
5	Yousef Nunez	3