



MarketFlash

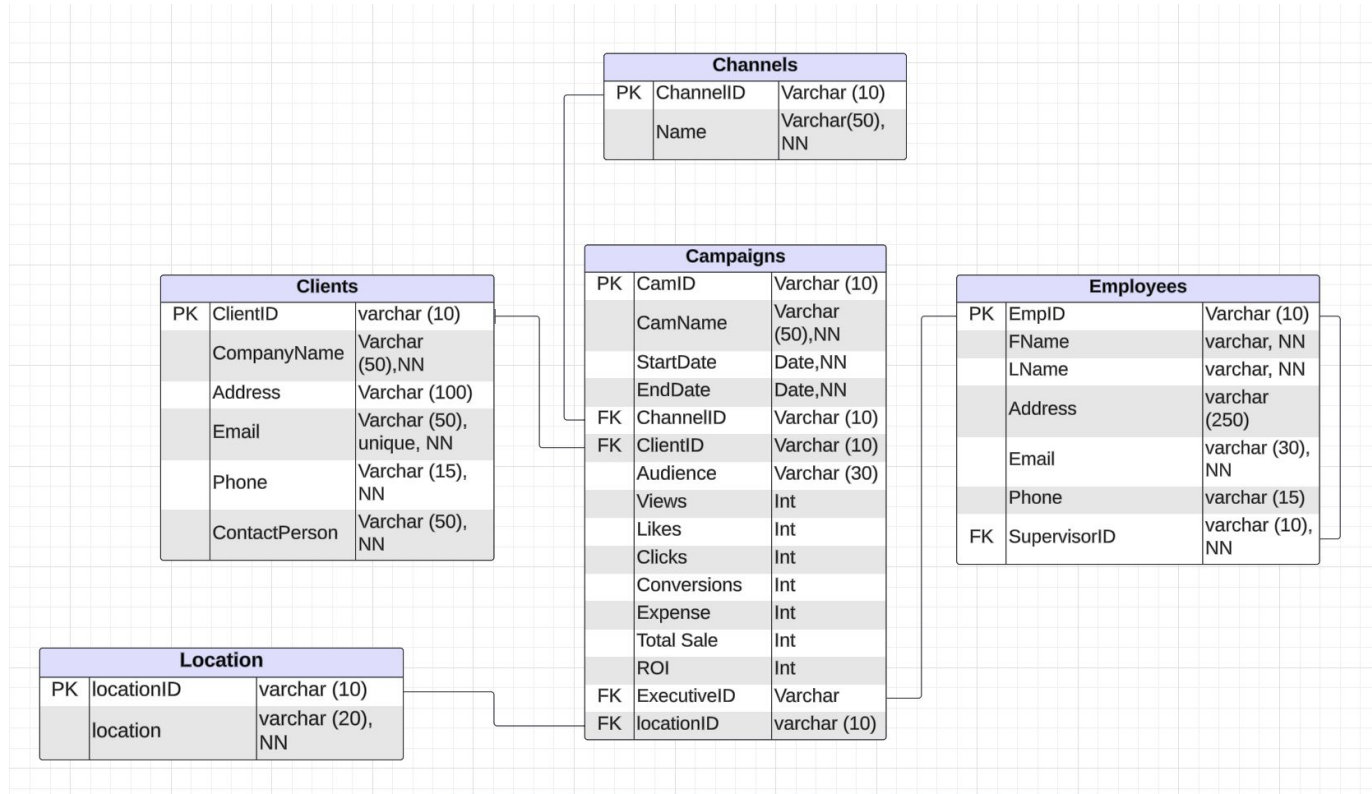


Database and Dashboard Design



Functional ER diagram

Based on the
given entities and
relationships,
here's the
Functional ER
Diagram



Database setup in Beekeeper Studio:

Filter

ENTITIES

Campaigns

CamID

CamName

StartDate

EndDate

ChannelID

ClientID

Audience

Views

Likes

Clicks

Conversions

Expense

TotalSale

ROI

ExecutiveID

LocationID

Channels

Clients

Employees

Location

+

varchar

varchar

date

date

varchar

varchar

varchar

int

int

int

int

int

decimal(10,2)

int

int

varchar

varchar

```
89
81 -- Create the Campaigns table
82 CREATE TABLE Campaigns (
83   CamID varchar PRIMARY KEY,
84   CamName varchar NOT NULL,
85   StartDate DATE NOT NULL,
86   EndDate DATE NOT NULL,
87   ChannelID varchar,
88   ClientID varchar,
89   Audience varchar,
90   Views INT DEFAULT 0,
91   Likes INT DEFAULT 0,
92   Clicks INT DEFAULT 0,
93   Conversions INT DEFAULT 0,
94   Expense DECIMAL(10, 2),
95   TotalSale INT,
96   ROI INT,
97   ExecutiveID varchar,
98   LocationID varchar,
99   CONSTRAINT fk_channel FOREIGN KEY (ChannelID) REFERENCES Channels(ChannelID),
100  CONSTRAINT fk_client FOREIGN KEY (ClientID) REFERENCES Clients(ClientID),
101  CONSTRAINT fk_executive FOREIGN KEY (ExecutiveID) REFERENCES Employees(EmpID),
102  CONSTRAINT fk_location FOREIGN KEY (LocationID) REFERENCES Location(LocationID)
103 );
104 -- Insert data into Campaigns
105 INSERT INTO Campaigns (CamID,CamName, StartDate, EndDate, ChannelID, ClientID, Audience, Views, Likes, Clicks, Conversions, Expense, TotalSale, ROI, ExecutiveID, LocationID)
106 ('001','Campaign 1', '2023-12-18', '2024-01-10', '001', '001', 'Adults 18-40', 23458, 7718, 1056, 702, NULL, NULL, 13961.03, '001', '001')
107 ('002','Campaign 2', '2023-10-12', '2023-11-09', '002', '002', 'Female 60+', 92422, 8075, 1360, 182, 50878.17, 16.15, 43804.31, '002', '002')
108 ('003','Campaign 3', '2023-05-18', '2023-06-04', '003', '003', 'Male 40-60', 45934, 2446, 1655, 669, 76729.41, 113.09, 36007.47, '003', '003')
109 ('004','Campaign 4', '2023-02-23', '2023-03-09', '004', '004', 'Female 18-40', 30391, 1700, 2669, 669, 42784.94, 14.32, 37425.85, '004', '004')
110 ('005','Campaign 5', '2023-11-20', '2023-12-11', '005', '005', 'Male 60+', 52042, 191, 4242, 753, 64163.39, 32.05, 48590.34, '005', '005')
111
```

Save

Run

	CamID	CamName	StartDate	EndDate	ChannelID	ClientID	Audience	Views	Likes	Clicks	Conversions	Expense	TotalSale	ROI	ExecutiveID	LocationID
1	001	Campaign 1	2023-12-18	2024-01-10	001	001	Adults 18-40	23458	7718	1056	702	(NULL)	(NULL)	13961.03	001	001
2	002	Campaign 2	2023-10-12	2023-11-09	002	002	Female 60+	92422	8075	1360	182	50878.17	16.15	43804.31	002	002
3	003	Campaign 3	2023-05-18	2023-06-04	003	003	Male 40-60	45934	2446	1655	669	76729.41	113.09	36007.47	003	003
4	004	Campaign 4	2023-02-23	2023-03-09	004	004	Female 18-40	30391	1700	2669	669	42784.94	14.32	37425.85	004	004

SQL queries to check the database

```
1 --Average cost per click
2 SELECT AVG(Expense / Clicks) AS AverageCostPerClick
3 FROM Campaigns
4 WHERE Clicks > 0;
5
6
7
8
```



	AverageCostPerClick
1	28.73216664204722

SQL queries to check the database

```
4 --Cost per conversion and ROI
5 SELECT
6     CamID,
7     CamName,
8     (Expense / Conversions) AS CostPerConversion,
9     ((Conversions * 100) / Expense) AS ROI
0 FROM Campaigns
1 WHERE Conversions > 0;
```



	CamID	CamName	CostPerConversion	ROI
1	001	Campaign 1	(NULL)	(NULL)
2	002	Campaign 2	279.5503846153846	0.35771726852597097
3	003	Campaign 3	114.69269058295964	0.8718951442478183
4	004	Campaign 4	63.953572496263085	1.5636343068378733
5	005	Campaign 5	85.21034528552457	1.173566421599607

SQL queries to check the database

```
2 -- Monthly Performance Trends
3 SELECT
4   strftime('%Y-%m', StartDate) AS Month,
5   SUM(Clicks) AS TotalClicks,
6   SUM(Conversions) AS TotalConversions,
7   SUM(Expense) AS TotalExpense
8 FROM Campaigns
9 GROUP BY Month;
```



	Year	Quarter	TotalClicks	TotalConversions	TotalExpense
1	2023	1	2669	669	42784.94
2	2023	2	1655	669	76729.41
3	2023	4	6658	1637	115041.56



MarketFlash



Dashboard Design



MarketFlash Campaigns Overview (2023)

Avg Expences (Sales Cam.) Avg Expe. (Sign up Cam.)

24,749 25,236

Avg Sales (Sales Cam.) Avg Conv. (Sign up Cam.)

51,804 508.2

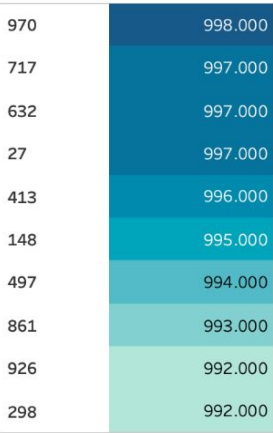
Avg Conversions by Audience



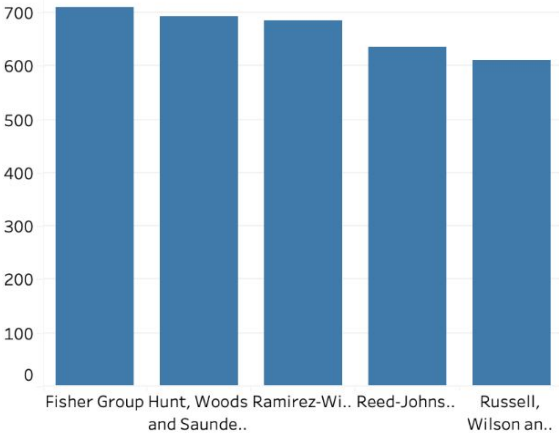
Avg Conversions Vs Location



Top 10 Campaigns Vs Conversions



Avg Top 5 Conversions Vs Clients



Costs per Conversions

Channel	Australia	Canada	Europe	India	Japan	LATAM	UK	USA
Email	1,732	4,233	5,238	1,027	1,487	2,744	1,909	2,218
Facebook	2,850	1,787	3,264	1,330	7,508	2,619	1,459	4,169
Instagr..	1,278	3,250	3,688	2,189	2,853	3,706	1,646	1,053
TikTok	2,943	1,826	3,794	1,071	2,609	2,479	2,678	7,354
YouTube	4,037	1,851	4,478	2,999	2,135	4,462	2,650	5,791

Avg conversions Vs Channel

