DAX Functions

Transaction Table:

- Number of transactions:= DISTINCTCOUNT(fact_transactions[transaction_sk])
- Avgerage Products per Transaction:=
```
AVERAGEX (
    VALUES ( 'fact_transactions'[transaction_fact_sk] ),
    CALCULATE ( DISTINCTCOUNT ('fact_transactions'[quantity])
))
```
- Revenue:=SUM(fact_transactions[amount])
- Product with highest revenue:=
```
MAXX (
    TOPN (
        1,
        SUMMARIZE (
            'dim_product',
            'dim_product'[product_name],
            "Revenue", [Revenue]
        ),
        [Revenue], DESC
    ),
    'dim_product'[product_name]
)
```
- Top locations by revenue:=
```
MAXX (
    TOPN (
        1,
        SUMMARIZE (
            'dim_store',
            'dim_store'[store_location],
            "Revenue", [Revenue]
        ),
        [Revenue], DESC
    ),
    'dim_store'[store_location]
)
```
- Most Redeemed Discount:=
```
MAXX (
    TOPN (
        1,
        SUMMARIZE (
            'fact_transactions',
            'fact_transactions'[Discount Label],
            "RedeemedCount", COUNTROWS ( 'fact_transactions' )
        ),
        [RedeemedCount], DESC
    ),
    'fact_transactions'[Discount Label]
)
```

- Discount Usage:=
```
ROUND(DIVIDE(
    COUNTROWS( FILTER( fact_transactions, fact_transactions[discount percentage] > 0 ) ),
    COUNTROWS( fact_transactions )
),2)
```

- Top Selling Categories by purchasing:=
```
VAR SummaryTable =
    ADDCOLUMNS (
        VALUES ( 'dim_product'[category]),
        "purchase",
            CALCULATE (
                COUNTROWS ( dim_interaction ),
                  dim_interaction[interaction_type] = "purchase"
            )
    )
VAR TopRow =
    TOPN ( 1, SummaryTable, [purchase], DESC )
RETURN
    MAXX ( TopRow, 'dim_product'[category] )
```
- Average Order Value:=
```
ROUND(
    DIVIDE(
        SUM(fact_transactions[price]),
        COUNT(fact_transactions[transaction_sk])
    ),
    2
)
```
- AddToCart Event:=
```
CALCULATE(
    COUNTROWS('dim_interaction'),
    'dim_interaction'[interaction_type] = "add_to_cart"
)
```
- Products with Highest AddToCart Event:=
```
VAR SummaryTable =
    ADDCOLUMNS (
        VALUES ( 'dim_product'[product_name]),
        "add-to-cart",
            CALCULATE (
                COUNTROWS ( dim_interaction ),
                  dim_interaction[interaction_type] = "add-to-cart"
            )
    )
VAR TopRow =
    TOPN ( 1, SummaryTable, [add-to-cart], DESC )
RETURN
    MAXX ( TopRow, 'dim_product'[product_name] )
```
- Avg Order Value:=
```
SUM(fact_transactions[price]) / COUNT(fact_transactions[transaction_fact_sk])
```

- discount label= SWITCH(
```
    TRUE(),
    'fact_transactions'[discount percentage] = 0, "No Discount",
    'fact_transactions'[discount percentage] <= 10, "Small",
    'fact_transactions'[discount percentage] <= 20, "Medium",
    'fact_transactions'[discount percentage] <= 30, "High"
)
```

Campaign Table:

- Total Campaigns:= DISTINCTCOUNT(dim_campaign[campaign_id])
- Average Campaign Duration:=

AVERAGE(dim_campaign[Campaign Duration (Days)])
- Average Revenue:= ROUND(AVERAGE(dim_campaign[Revenue Per campaign]), 2)

- Revenue Per campaign = COALESCE (
CALCULATE (
COUNTROWS ('fact_transactions'),
FILTER (
'fact_transactions',
'fact_transactions'[campaign_sk] = dim_campaign[campaign_sk] &&
NOT ISBLANK ('fact_transactions'[discount percentage]) &&
'fact_transactions'[discount percentage] > 0
)
) ,
0
)
- Discount Usage Per Campaign = COALESCE (
CALCULATE (
COUNTROWS ('fact_transactions'),
FILTER (
'fact_transactions',
'fact_transactions'[campaign_sk] = dim_campaign[campaign_sk] &&
NOT ISBLANK ('fact_transactions'[discount percentage]) &&
'fact_transactions'[discount percentage] > 0
)
) ,
0
)
- Campaign Duration (Days) =
DATEDIFF(dim_campaign[start_date], dim_campaign[end_date], DAY)

Dim_Interaction Table:

- Total Interactions:= COUNT(dim_interaction[interaction_sk])
- Status:=
VAR TopStatus =
TOPN (
1,
VALUES ('dim_interaction'[Conversion Status]),
[Conversion Status],
DESC
)
RETURN
MAXX (TopStatus, 'dim_interaction'[Conversion Status])

- Conversion Status: IF(
dim_interaction[interaction_type] = "purchase",
"Completed",
"Not Completed"
)

Channel Table:

- Top Interaction Channel:=
MAXX (
TOPN (
1,
SUMMARIZE (

```
            'dim_channel',
            'dim_channel'[channel_name],
            "CountChannel", COUNTROWS ( 'dim_channel' )
        ),
        [CountChannel], DESC
    ),
    'dim_channel'[channel_name]
)
```

Fact Reviews Table:

- average rating:= ROUND(AVERAGE(fact_reviews[rating]),0)

Dim Reviews Table:

- total reviews:= COUNT(dim_reviews[review_id])

Product Table:

- Total Categories:= DISTINCTCOUNT('dim_product'[category])
- Total Products:= COUNT(dim_product[product_name])

Customer Table:

- Total Unigue Customers:= DISTINCTCOUNT('dim_customer'[customer_id])
- Top device preference:=

```
VAR SummaryTable =
    SUMMARIZE(
        dim_channel,
        dim_channel[channel_name],
        "Device Preference Count", COUNTROWS(RELATEDTABLE(dim_interaction))
    )
VAR TopRow =
    TOPN(1, SummaryTable, [Top Interaction Channel], DESC)
RETURN
    MAXX(TopRow, dim_channel[channel_name])
```

- Age Group=

```
SWITCH(
    TRUE(),
    'dim_customer'[age]>= 0 && 'dim_customer'[age] <= 20, "0-20",
    'dim_customer'[age]<= 40, "21-40",
    'dim_customer'[age] <= 60, "41-60",
    'dim_customer'[age] <= 80, "61-80",
    "80+"
)
```

Payment Method Table:

- Most Frequent Payment Method Count:=

```
MAXX (
    TOPN (
        1,
        SUMMARIZE (
            'DIM_PAYMENT_METHOD',
            'dim_payment_method'[payment_method_name],
            "TxnCount", COUNTROWS ( RELATEDTABLE ( 'FACT_TRANSACTIONS' ) )
        ),
```

```
        [TxnCount], DESC
    ),
    [TxnCount]
)
```

- Most Frequent Payment Method:=

```
MAXX (
    TOPN (
        1,
        SUMMARIZE (
            'DIM_PAYMENT_METHOD',
            'dim_payment_method'[payment_method_name],
            "TransactionsCount", COUNTROWS ( RELATEDTABLE ( 'fact_transactions' ) )
        ),
        [TransactionsCount], DESC
    ),
    'dim_payment_method'[payment_method_name]
)
```

Store Table:

- Most Common Store:=

```
MAXX (
    TOPN (
        1,
        SUMMARIZE (
            'dim_store',
            'dim_store'[store_location],
            "StoreCount", COUNTROWS ( 'FACT_TRANSACTIONS' )
        ),
        [StoreCount], DESC
    ),
      'dim_store'[store_location]
)
```

Campaign Performance Table:

- Total Impressions:= SUM('fact_campaign_performance'[impressions])
- Average conversion rate:= ROUND(AVERAGE(fact_campaign_performance[conversions_rate]),2)
- Conversion Rate (Purchases Only):=

```
ROUND(DIVIDE(
    CALCULATE(
        SUM('fact_campaign_performance'[conversions]),
        dim_interaction[interaction_type] = "purchase"
    ),
    CALCULATE(
        COUNTROWS(dim_interaction),
        dim_interaction[interaction_type] = "purchase"
    )
),2)
```

- Email Campaign Conversion Rate:=

```
VAR SummaryTable =
    ADDCOLUMNS (
        VALUES ( 'fact_campaign_performance'[conversions_rate]),
        "email",
            CALCULATE (
                COUNTROWS ( 'dim_campaign' ),
                  dim_campaign[campaign_type] = "email"
            )
    )
VAR TopRow =
```

```
    TOPN ( 1, SummaryTable, [email], DESC )
RETURN
    MAXX ( TopRow, 'fact_campaign_performance'[conversions_rate] )
```

- Average Budget per campaign:= ROUND(AVERAGE(fact_campaign_performance[budget]),3)
- Total roi:= SUM(fact_campaign_performance[roi])

- Bounce Rate =100-fact_campaign_performance[conversions_rate]

Segment Table:

- Inactive Customers %:=

```
VAR NewCustomersCount =
    CALCULATE(
        DISTINCTCOUNT(dim_customer[customer_id]),
        'dim_segment'[segment_name] = "Inactive Customers"
    )
VAR AllCustomersCount =
    CALCULATE(
        DISTINCTCOUNT(dim_customer[customer_id])
    )
RETURN
    DIVIDE(NewCustomersCount, AllCustomersCount)
```

- Loyal Customers %:=

```
VAR NewCustomersCount =
    CALCULATE(
        DISTINCTCOUNT(dim_customer[customer_id]),
        'dim_segment'[segment_name] = "Loyal Customers"
    )
VAR AllCustomersCount =
    CALCULATE(
        DISTINCTCOUNT(dim_customer[customer_id])
    )
RETURN
    DIVIDE(NewCustomersCount, AllCustomersCount)
```

- New Customers %:=

```
VAR NewCustomersCount =
    CALCULATE(
        DISTINCTCOUNT(dim_customer[customer_id]),
        'dim_segment'[segment_name] = "New Customers"
    )
VAR AllCustomersCount =
    CALCULATE(
        DISTINCTCOUNT(dim_customer[customer_id])
    )
RETURN
    DIVIDE(NewCustomersCount, AllCustomersCount)
```

- In-Store Shoppers %:=

```
VAR NewCustomersCount =
    CALCULATE(
        DISTINCTCOUNT(dim_customer[customer_id]),
        'dim_segment'[segment_name] = "In-Store Shoppers"
    )
VAR AllCustomersCount =
    CALCULATE(
        DISTINCTCOUNT(dim_customer[customer_id])
    )
RETURN
    DIVIDE(NewCustomersCount, AllCustomersCount)
```

- Online Shoppers %:=

```
VAR NewCustomersCount =
    CALCULATE(
        DISTINCTCOUNT(dim_customer[customer_id]),
        'dim_segment'[segment_name] = "Online Shoppers"
    )
VAR AllCustomersCount =
    CALCULATE(
        DISTINCTCOUNT(dim_customer[customer_id])
    )
RETURN
    DIVIDE(NewCustomersCount, AllCustomersCount)
```

Fact Tickets Table:

- average resolution time in hours:= ROUND(AVERAGE(fact_tickets[resolution_time_hours]),2)
- Most Common Ticket Status:=

```
MAXX (
    TOPN (
        1,
        SUMMARIZE (
            'fact_tickets',
            'FACT_TICKETS'[RESOLUTION_STATUS],
            "StatusCount", COUNTROWS ( 'FACT_TICKETS' )
        ),
        [StatusCount], DESC
    ),
    'FACT_TICKETS'[RESOLUTION_STATUS]
)
```

- Dominant Ticket Priority:=

```
MAXX (
    TOPN (
        1,
        SUMMARIZE (
            'FACT_TICKETS',
            'fact_tickets'[priority],
            "PriorityCount", COUNTROWS ( 'FACT_TICKETS' )
        ),
        [PriorityCount], DESC
    ),
    'fact_tickets'[priority]
)
```


Dim Tickets Table:

- Product Return Rate:=

```
DIVIDE (
    CALCULATE (
        SUM ( 'fact_transactions'[quantity] ),
        'dim_tickets'[issue_category] = "RETURNS"
    ),
    SUM ('fact_transactions'[quantity])
)
```

- Most Common Issue:=

```
MAXX (
    TOPN (
        1,
        SUMMARIZE (
            'dim_tickets',
            'dim_tickets'[issue_category],
            "IssueCount", COUNTROWS ( 'dim_tickets')
```

```
        ),
        [IssueCount], DESC
    ),
    'dim_tickets'[issue_category]
)
```

- Most Common Issue Count:=

```
MAXX (
    TOPN (
        1,
        SUMMARIZE (
            'dim_tickets',
            'dim_tickets'[issue_category],
            "IssueCount", COUNTROWS ( 'dim_tickets' )
        ),
        [IssueCount], DESC
    ),
    [IssueCount]
)
```