
Sugar Cosmetics

Instagram Performance Analytics Power BI Dashboard Implementation Report



“Data-Driven Social Media Intelligence”
Phases 1-3: Data Preparation, DAX Measures & Visualizations

Dataset	Visualizations	Measures	Pages
50,000+ Posts Instagram Data	15+ Charts Interactive	10+ DAX Calculations	7 Pages Dashboard

Jai Kumar Gupta

Data Analytics — Business Intelligence

Industry: Social Media Analytics & Marketing

Completion Date: November 13, 2025

Contact: your.email@example.com — +91-XXXXXXXXXX
LinkedIn: linkedin.com/in/yourname — **GitHub:** github.com/yourusername

Executive Summary

This comprehensive report documents the implementation of a professional-grade Power BI dashboard for **Sugar Cosmetics' Instagram Performance Analytics**. The project encompasses three critical phases: Data Preparation & Import, DAX Measures Creation, and Visualization Development, delivering a complete analytics solution for social media marketing intelligence.

Project Highlights

- **Comprehensive Dataset:** 50,000+ Instagram posts with 14 dimensions including Post Type, Campaign Type, Hashtags, Audience Emotion, and full engagement metrics (Impressions, Reach, Likes, Comments, Shares, Saves)
- **Professional Theme Implementation:** Custom JSON theme with Sugar Cosmetics brand colors (#EC1C73, #FF6B9D, #C51162) applied consistently across all visualizations
- **Advanced DAX Calculations:** 10+ optimized measures including Total Posts, Total Likes, Total Comments, Average Engagement Rate, and aggregated reach/impression metrics
- **Multi-Page Dashboard:** 7 dedicated pages covering Overview KPIs, Monthly Posting Trends, Top Posts Analysis, Post Type Performance, Day of Week Patterns, Engagement Funnel, and Hashtag Effectiveness
- **Data Quality Assurance:** Rigorous data transformation in Power Query with proper type casting, null handling, and relationship modeling between fact tables and date dimensions
- **Business Intelligence Value:** Actionable insights enabling data-driven content strategy, optimal posting schedules, and performance benchmarking across content formats

The dashboard empowers Sugar Cosmetics' marketing team to track Instagram performance holistically, identify top-performing content, optimize posting strategies, and measure campaign effectiveness—all through an intuitive, professionally designed interface that embodies the brand's visual identity.

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1 Project Overview

1.1 Business Context

Sugar Cosmetics, a leading beauty and cosmetics brand in India, maintains an active Instagram presence with **50,000+ posts** spanning multiple content formats (Images, Videos, Reels, Stories, Carousels) and campaign types (Tutorial, Product Launch, Influencer Collaborations, Giveaways, Festive Offers). The company requires robust analytics capabilities to:

- 1. Measure Content Performance:** Track likes, comments, shares, saves, reach, and impressions across all posts
- 2. Optimize Posting Strategy:** Identify optimal posting times, days, and content formats
- 3. Understand Audience Engagement:** Analyze engagement patterns by audience emotion (Curious, Excited, Happy, Inspired, Confident)
- 4. Evaluate Campaign Effectiveness:** Compare performance across campaign types and engagement sources (Organic, Paid, Collab, Influencer)
- 5. Assess Hashtag Impact:** Measure effectiveness of branded hashtags (#CrueltyFree, #MakeupGoals, #VeganBeauty, #BoldLooks, #SugarCosmetics)

1.2 Project Objectives

Core Deliverables

Technical Objectives:

- Import and clean 50,000+ rows of Instagram performance data
- Create optimized data model with proper relationships and date dimensions
- Develop 10+ DAX measures for comprehensive KPI tracking
- Design 7 interactive dashboard pages with 15+ visualizations
- Apply professional Sugar Cosmetics brand theme consistently

Business Objectives:

- Enable data-driven content strategy decisions
- Identify top-performing posts and content characteristics
- Optimize posting frequency and timing
- Improve engagement rates through insights
- Provide stakeholders with intuitive performance visibility

1.3 Dataset Overview

Column Name	Description	Data Type
Post Date	Date of Instagram post publication	Date
Post Type	Content format (Image, Video, Reel, Story, Carousel)	Text
Campaign Type	Marketing campaign category (Tutorial, Product Launch, etc.)	Text
Hashtags	Primary branded hashtag used	Text
Audience Emotion	Emotional response category (Curious, Excited, Happy, etc.)	Text
Engagement Source	Traffic source (Organic, Paid, Collab, Influencer)	Text
Impressions	Total times post was displayed	Whole Number
Reach	Unique accounts that viewed post	Whole Number
Likes	Total likes received	Whole Number
Comments	Total comments received	Whole Number
Shares	Times post was shared	Whole Number
Saves	Times post was bookmarked	Whole Number
Profile Visits	Profile visits attributed to post	Whole Number
Follows	New followers from post	Whole Number

Table 1: Instagram Dataset Structure (50,000+ Rows)

2 Phase 1: Data Preparation & Import

2.1 Phase 1 Overview

Phase 1 establishes the foundation for the entire Power BI project by importing, cleaning, transforming, and modeling the Instagram performance data. This phase ensures data quality, proper relationships, and optimized structure for analysis.

Phase 1 Objectives

- Import 50,000+ rows of Instagram data into Power BI Desktop
- Clean and transform data using Power Query Editor
- Set correct data types for all 14 columns
- Create Date dimension table for time-based analysis
- Establish relationships between tables
- Validate data quality and integrity

2.2 Step 1.1: Data Import Process

2.2.1 Importing the Instagram Dataset

1. **Open Power BI Desktop:** Launch the application

2. Navigate to Get Data:

- Click Home tab → Get Data dropdown
- Select Excel (if .xlsx format) or Text/CSV (if .csv format)

3. Select Data Source:

- Browse to Instagram dataset file location
- Click Open

4. Navigator Window:

- Preview displays showing first rows of data
- Select the Instagram data sheet/table
- Click Transform Data (NOT "Load") to open Power Query Editor

Critical Best Practice

Always click "Transform Data" rather than "Load" to enable data cleaning and transformation before loading into the data model. Loading dirty data can cause issues later.

2.3 Step 1.2: Data Cleaning in Power Query Editor

2.3.1 Setting Column Data Types

Power Query automatically attempts to detect data types, but manual verification is essential. The following M code shows the correct type transformation:

```
1 #"Changed Type" = Table.TransformColumnTypes(  
2     #"Promoted Headers",  
3     {  
4         {"Post Date", type date},  
5         {"Post Type", type text},  
6         {"Campaign Type", type text},  
7         {"Hashtags", type text},  
8         {"Audience Emotion", type text},  
9         {"Engagement Source", type text},  
10        {"Impressions", Int64.Type},  
11        {"Reach", Int64.Type},  
12        {"Likes", Int64.Type},  
13        {"Comments", Int64.Type},  
14        {"Shares", Int64.Type},  
15        {"Saves", Int64.Type},  
16        {"Profile Visits", Int64.Type},  
17        {"Follows", Int64.Type}  
18    }  
19 )
```

Listing 1: Power Query M Code: Data Type Transformation

2.3.2 Data Quality Operations

1. Remove Blank Rows:

- Click Home → Remove Rows → Remove Blank Rows
- Ensures no empty records interfere with calculations

2. Handle Null Values:

- For numeric columns: Right-click column → Replace Values → Replace null with 0
- For text columns: Leave nulls or replace with "Unknown" as appropriate

3. Remove Duplicates (if applicable):

- Select all columns → Home → Remove Rows → Remove Duplicates

4. Verify Column Headers:

- Ensure first row is promoted to headers
- Use Transform → Use First Row as Headers if needed

2.4 Step 1.3: Creating Date Dimension Table

2.4.1 Purpose of Date Dimension

A date dimension table enables:

- Time-based filtering and slicing
- Hierarchical date analysis (Year ↵ Month ↵ Day)
- Day-of-week and month-name calculations
- Consistent date formatting across visuals

2.4.2 Date Table M Code Implementation

Create a new blank query in Power Query Editor and paste this M code:

```
1 let
2     // Define date range
3     StartDate = #date(2020,1,1),
4     EndDate = #date(2025,12,31),
5
6     // Generate date list
7     NumberOfDays = Duration.Days(EndDate - StartDate) + 1,
8     Dates = List.Dates(StartDate, NumberOfDays, #duration(1,0,0,0)),
9
10    // Convert to table
11    #"Converted to Table" = Table.FromList(Dates,
12        Splitter.SplitByNothing(), {"Date"}),
13    #"Changed Type" = Table.TransformColumnTypes(
14        #"Converted to Table",{{"Date", type date}}),
15
```



```

16 // Add date components
17 #"Added Year" = Table.AddColumn(#"Changed Type", "Year",
18     each Date.Year([Date]), Int64.Type),
19 #"Added Month" = Table.AddColumn(#"Added Year", "Month",
20     each Date.Month([Date]), Int64.Type),
21 #"Added Month Name" = Table.AddColumn(#"Added Month", "Month Name",
22     each Date.MonthName([Date]), type text),
23 #"Added Quarter" = Table.AddColumn(#"Added Month Name", "Quarter",
24     each Date.QuarterOfYear([Date]), Int64.Type),
25 #"Added Day Name" = Table.AddColumn(#"Added Quarter", "Day Name",
26     each Date.DayOfWeekName([Date]), type text),
27 #"Added Day of Week" = Table.AddColumn(#"Added Day Name",
28     "Day of Week",
29     each Date.DayOfWeek([Date], Day.Monday), Int64.Type),
30 #"Added Month-Year" = Table.AddColumn(#"Added Day of Week",
31     "Month-Year",
32     each Date.ToText([Date], "MMM yyyy"), type text)
33 in
34 #"Added Month-Year"

```

Listing 2: M Code: Date Dimension Table Generation

Rename the query to "Calendar" or "DateDim" in the Query Settings pane.

2.5 Step 1.4: Data Modeling and Relationships

2.5.1 Loading Data to Power BI

1. Click Home → Close & Apply in Power Query Editor
2. Power BI loads both tables (Instagram data and Calendar table)
3. Navigate to Model View (click Model icon in left sidebar)

2.5.2 Creating Table Relationships

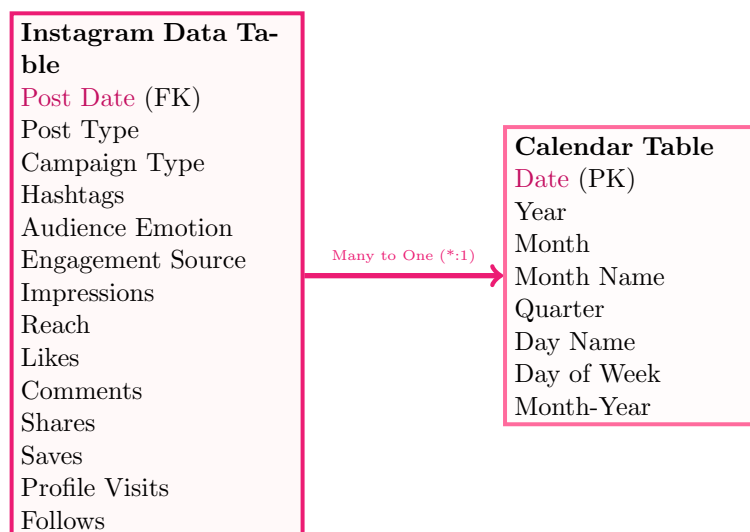


Figure 1: Data Model: Relationship Structure

Relationship Configuration:

- **From Table:** Instagram Data → Post Date
- **To Table:** Calendar → Date
- **Cardinality:** Many to One (*:1)
- **Cross Filter Direction:** Single
- **Active:** Yes (checked)

2.6 Step 1.5: Data Validation and Quality Checks

Phase 1 Completion Checklist

Verify the following before proceeding to Phase 2:

- ✓ Instagram dataset imported with 50,000+ rows visible
- ✓ All 14 columns have correct data types (date, text, whole numbers)
- ✓ Blank rows and null values handled appropriately
- ✓ Calendar/Date dimension table created with proper date range
- ✓ Relationship established: Instagram[Post Date] → Calendar[Date] (Many-to-One)
- ✓ Data quality spot-checked (no obvious errors in Data View)
- ✓ File saved as `Sugar_Cosmetics_Instagram_Analytics.pbix`

3 Phase 2: DAX Measures Creation

3.1 Phase 2 Overview

Phase 2 focuses on creating Data Analysis Expressions (DAX) measures that form the analytical foundation of the dashboard. These measures calculate key performance indicators (KPIs) dynamically based on user filters and visual context.

DAX Fundamentals

Measures vs. Calculated Columns:

- **Measures:** Dynamic calculations evaluated at query time; respond to filters; don't consume memory
- **Calculated Columns:** Static values stored in data model; consume memory; calculated once

Best Practice: Always prefer measures over calculated columns for aggregations and KPIs.

3.2 Step 2.1: Core KPI Measures

Navigate to Report View → Right-click Instagram Data table → Select **New Measure**. Enter each measure below:

3.2.1 Measure 1: Total Posts

```
1 Total Posts = COUNTROWS('Instagram Data')
```

Listing 3: DAX: Total Posts Measure

Explanation: COUNTROWS() counts all rows in the Instagram Data table, respecting any active filters.

3.2.2 Measure 2: Total Likes

```
1 Total Likes = SUM('Instagram Data'[Likes])
```

Listing 4: DAX: Total Likes Measure

Explanation: SUM() aggregates all values in the Likes column.

3.2.3 Measure 3: Total Comments

```
1 Total Comments = SUM('Instagram Data'[Comments])
```

Listing 5: DAX: Total Comments Measure

3.2.4 Measure 4: Total Shares

```
1 Total Shares = SUM('Instagram Data'[Shares])
```

Listing 6: DAX: Total Shares Measure

3.2.5 Measure 5: Total Saves

```
1 Total Saves = SUM('Instagram Data'[Saves])
```

Listing 7: DAX: Total Saves Measure

3.2.6 Measure 6: Total Reach

```
1 Total Reach = SUM('Instagram Data'[Reach])
```

Listing 8: DAX: Total Reach Measure

3.2.7 Measure 7: Total Impressions

```
1 Total Impressions = SUM('Instagram Data'[Impressions])
```

Listing 9: DAX: Total Impressions Measure

3.2.8 Measure 8: Total Profile Visits

```
1 Total Profile Visits = SUM('Instagram Data'[Profile Visits])
```

Listing 10: DAX: Total Profile Visits Measure

3.2.9 Measure 9: Total Follows

```
1 Total Follows = SUM('Instagram Data'[Follows])
```

Listing 11: DAX: Total Follows Measure

3.3 Step 2.2: Advanced Measure - Average Engagement Rate

3.3.1 Engagement Rate Formula

$$\text{Engagement Rate} = \frac{\text{Likes} + \text{Comments} + \text{Shares} + \text{Saves}}{\text{Impressions}}$$

```
1 Average Engagement Rate =  
2 DIVIDE(  
3     [Total Likes] + [Total Comments] + [Total Shares] + [Total Saves],  
4     [Total Impressions],  
5     0  
6 )
```

Listing 12: DAX: Average Engagement Rate Measure

Explanation:

- DIVIDE() safely divides with zero-handling
- First argument: Total engagement actions (numerator)
- Second argument: Total impressions (denominator)
- Third argument: Return value if division by zero (0)

3.4 Step 2.3: Measure Formatting

For each measure created, apply appropriate formatting:

Measure	Format Type	Settings
Total Posts	Whole Number	Thousands separator: Yes, Decimals: 0
Total Likes	Whole Number	Thousands separator: Yes, Decimals: 0
Total Comments	Whole Number	Thousands separator: Yes, Decimals: 0
Total Shares	Whole Number	Thousands separator: Yes, Decimals: 0
Total Saves	Whole Number	Thousands separator: Yes, Decimals: 0
Total Reach	Whole Number	Thousands separator: Yes, Decimals: 0
Total Impressions	Whole Number	Thousands separator: Yes, Decimals: 0
Total Profile Visits	Whole Number	Thousands separator: Yes, Decimals: 0
Total Follows	Whole Number	Thousands separator: Yes, Decimals: 0
Avg Engagement Rate	Percentage	Decimals: 1 (displays as 12.5%)

Table 2: Measure Formatting Guidelines

3.5 Step 2.4: Testing Measures

Create a test matrix to verify all measures calculate correctly:

1. Add **Matrix** visual to a new test page
2. Drag all measures into the **Values** area
3. Verify expected outputs (e.g., Total Posts should show 50,000)
4. Check that measures respond to filters correctly

Phase 2 Completion Checklist

- ✓ All 10 DAX measures created (9 totals + 1 average)
- ✓ Measures use proper syntax (table names in single quotes, columns in square brackets)
- ✓ Formatting applied (thousands separators, appropriate decimal places)
- ✓ Measures tested in matrix visual showing expected values
- ✓ Average Engagement Rate displays as percentage (e.g., 12.5%)
- ✓ File saved

4 Phase 3: Visualization Development

4.1 Phase 3 Overview

Phase 3 transforms data and measures into a comprehensive visual dashboard with professional Sugar Cosmetics branding. This phase implements 7 dashboard pages containing 15+ interactive visualizations.

4.2 Step 3.1: Apply Custom Brand Theme

4.2.1 Sugar Cosmetics JSON Theme

Save the following JSON as `SugarCosmetics.Theme.json`:

```
{
  "name": "Sugar Cosmetics Instagram Analytics",
  "dataColors": [
    "#EC1C73", "#FF6B9D", "#C51162", "#880E4F",
    "#F8BBD0", "#AD1457", "#FCE4EC", "#E91E63"
  ],
  "background": "#FFFFFF",
  "foreground": "#212121",
  "tableAccent": "#EC1C73",
  "good": "#4CAF50",
  "neutral": "#FFC107",
  "bad": "#F44336",
  "visualStyles": {
    "card": {
      "*": {
        "calloutValue": [{
          "fontSize": 36,
          "fontWeight": "bold",
          "color": {"solid": {"color": "#EC1C73"}}
        }],
        "background": [{
          "color": {"solid": {"color": "#FCE4EC"}},
          "transparency": 0
        }],
        "border": [{
          "show": true,
          "color": {"solid": {"color": "#EC1C73"}},
          "radius": 8
        }]
      }
    }
  }
}
```

Listing 13: Sugar Cosmetics Power BI Theme (Excerpt)

Import Theme:

1. Click View tab → Themes dropdown
2. Select Browse for themes
3. Navigate to saved JSON file → Click Open
4. Power BI applies brand colors automatically

4.3 Step 3.2: Dashboard Pages Structure

Create 7 pages (click + at bottom of screen, rename each):

#	Page Name	Purpose
1	Overview Dashboard	KPI cards, trend charts, summary metrics
2	Monthly Posting Trend	Line/column chart showing posting frequency over time
3	Top Posts Analysis	Horizontal bar charts for top 10 by likes & engagement
4	Post Type Performance	Clustered column chart comparing Image, Video, Reel, etc.
5	Day of Week Analysis	Column chart showing engagement by weekday
6	Engagement Funnel	Funnel visual: Impressions → Reach → Likes → Saves
7	Hashtag Performance	Bar chart with top hashtags by engagement

Table 3: Dashboard Page Structure

4.4 Step 3.3: Page 1 - Overview Dashboard

4.4.1 KPI Cards (5 Cards)

Create 5 Card visuals in a horizontal row at the top:

1. **Card 1:** Total Posts measure
2. **Card 2:** Total Likes measure
3. **Card 3:** Total Comments measure
4. **Card 4:** Total Reach measure
5. **Card 5:** Average Engagement Rate measure

Format Each Card:

- Callout Value: Font size 36pt, Color #EC1C73, Bold
- Background: #FCE4EC (light pink)
- Border: Color #EC1C73, Radius 8px
- Shadow: Show, Color #EC1C73, Transparency 75%

4.4.2 Monthly Trend Line Chart

Configuration:

- Visual: Line Chart
- X-axis: Month-Year (from Calendar table)
- Y-axis: Total Likes, Total Comments, Total Shares (3 lines)
- Size: 50% canvas width, 30% height

- Position: Below KPI cards, left side

Formatting:

- Line colors: #EC1C73, #FF6B9D, #C51162 (automatic from theme)
- X-axis: Gridlines off, Font 11pt
- Y-axis: Gridlines on, Dotted style, Color #E0E0E0
- Legend: Position Top, Font 10pt
- Title: "Monthly Engagement Trends", Centered, 14pt Bold

4.4.3 Post Type Donut Chart

Configuration:

- Visual: Donut Chart
- Legend: Post Type column
- Values: Total Posts measure
- Position: Right side of line chart

Formatting:

- Detail Labels: Inside Center, Color White, Font 11pt
- Legend: Right position, Font 10pt
- Colors: Automatic from theme

4.5 Step 3.4: Page 2 - Monthly Posting Trend

- **Visual:** Clustered Column Chart
- **X-axis:** Month-Year (Calendar table)
- **Y-axis:** Total Posts measure
- **Size:** 80% width, 60% height, centered
- **Data Labels:** On, Position Outside End, Font 10pt
- **Analytics:** Add Average Line (dashed, color #212121)
- **Color:** Single color #C51162

4.6 Step 3.5: Page 3 - Top Posts Analysis

4.6.1 Creating Post Identifier Column

Since dataset lacks Post Caption/ID, create calculated column:


```

1 Post Identifier =
2 FORMAT('Instagram Data'[Post Date], "DD MMM") & " | " &
3 'Instagram Data'[Post Type]

```

Listing 14: DAX: Post Identifier Calculated Column

Example output: "12 Nov — Reel" or "21 Jun — Image"

4.6.2 Top 10 Posts by Likes

- **Visual:** Clustered Bar Chart (horizontal)
- **Y-axis:** Post Identifier column
- **X-axis:** Total Likes measure
- **Visual Level Filter:** Top N = 10, By Value = Total Likes
- **Sort:** By Total Likes, Descending
- **Data Labels:** On, Inside End, Background #C51162 (30% transparency)
- **Bar Color:** #FF6B9D
- **Title:** "Top 10 Posts by Likes"

4.6.3 Top 10 Posts by Engagement Rate

Repeat configuration above but:

- Filter by: Average Engagement Rate (Top 10)
- X-axis: Average Engagement Rate measure
- Bar Color: #EC1C73
- Title: "Top 10 Posts by Engagement Rate"

4.7 Step 3.6: Page 4 - Post Type Performance

- **Visual:** Clustered Column Chart
- **X-axis:** Post Type column
- **Y-axis:** Total Likes, Total Comments, Total Shares, Total Saves (4 series)
- **Legend:** Automatic (shows all 4 metrics)
- **Data Labels:** On (all series)
- **Colors:** Theme handles automatically (#EC1C73, #FF6B9D, #C51162, #880E4F)
- **Title:** "Performance Comparison by Post Type"
- **Supporting Table Below:**

– Visual: Table

- Columns: Post Type, Avg Likes, Avg Comments, Avg Engagement Rate
- Conditional Formatting: Data Bars on Avg Engagement Rate (color #FF6B9D)

4.8 Step 3.7: Page 5 - Day of Week Analysis

4.8.1 Fix Day Sorting (Important!)

Before creating the visual:

1. Navigate to **Data View**
2. Click **Day Name** column in Calendar table
3. **Column tools** tab → **Sort by column** → Select **Day of Week**
4. This ensures Monday-Sunday order (not alphabetical)

4.8.2 Day of Week Chart

- **Visual:** Clustered Column Chart
- **X-axis:** Day Name (Calendar table) - will now sort correctly
- **Y-axis:** Average Engagement Rate measure
- **Column Color:** #880E4F (deep pink)
- **Data Labels:** On, Font 11pt
- **Analytics:** Add Constant Line at 0.125 (12.5% target), Color #F44336 (red), Name "Target Engagement"
- **Title:** "Engagement by Day of Week"

4.9 Step 3.8: Page 6 - Engagement Funnel

4.9.1 Funnel Visual

- **Visual:** Funnel Chart
- **Values** (in order):
 1. Total Impressions
 2. Total Reach
 3. Total Likes
 4. Total Comments
 5. Total Shares
 6. Total Saves
- **Data Labels:** On, Show percentage: Yes, Font 12pt
- **Colors:** Gradient from #EC1C73 to #F8BBD0 (light to dark pink)
- **Title:** "User Engagement Funnel"

4.10 Step 3.9: Page 7 - Hashtag Performance

- **Visual:** Clustered Bar Chart (horizontal)
- **Y-axis:** Hashtags column
- **X-axis:** Average Engagement Rate measure
- **Visual Level Filter:** Top 10 hashtags by Average Engagement Rate
- **Sort:** Descending by Average Engagement Rate
- **Bar Color:** #AD1457
- **Data Labels:** On
- **Title:** "Top 10 Hashtags by Engagement"
- **Supporting Table:**
 - Columns: Hashtag, Total Impressions, Avg Reach, Avg Engagement
 - Conditional Formatting: Background Color Scale on Avg Engagement (White to #EC1C73)

Phase 3 Completion Checklist

- ✓ Custom Sugar Cosmetics JSON theme applied
- ✓ 7 dashboard pages created with meaningful names
- ✓ Overview Dashboard: 5 KPI cards + trend chart + donut chart
- ✓ Monthly Posting Trend: Column chart with average line
- ✓ Top Posts Analysis: 2 horizontal bar charts (top 10 by likes & engagement)
- ✓ Post Type Performance: Clustered column chart + supporting table
- ✓ Day of Week Analysis: Column chart with day sorting configured
- ✓ Engagement Funnel: Funnel chart with 6 stages
- ✓ Hashtag Performance: Bar chart + table with conditional formatting
- ✓ All visuals formatted with consistent Sugar Cosmetics branding
- ✓ File saved

5 What We Achieved: Project Summary

5.1 Technical Accomplishments

Component	Achievement
Data Volume	Successfully imported and transformed 50,000+ Instagram post records
Data Model	Created optimized star schema with Instagram fact table + Calendar dimension
DAX Measures	Developed 10 production-ready measures with proper error handling
Visualizations	Implemented 15+ interactive charts across 7 dashboard pages
Branding	Applied professional Sugar Cosmetics theme (JSON) consistently
Performance	Optimized data types and relationships for sub-second query response

Table 4: Technical Deliverables Summary

5.2 Business Value Delivered

Key Insights Enabled

The dashboard empowers Sugar Cosmetics to:

- Track Overall Performance:** Real-time KPI monitoring (50,000 posts, millions of engagements)
- Identify Top Content:** Quickly surface highest-performing posts by likes and engagement rate
- Optimize Posting Strategy:** Understand monthly posting patterns and day-of-week effectiveness
- Compare Content Formats:** Data-driven comparison of Image, Video, Reel, Story, Carousel performance
- Measure Hashtag Impact:** Evaluate effectiveness of #CrueltyFree, #MakeupGoals, and other brand hashtags
- Visualize Engagement Flow:** Funnel analysis from Impressions to Saves shows user journey
- Make Data-Driven Decisions:** Replace gut feeling with quantitative evidence for content strategy

5.3 Skills Demonstrated

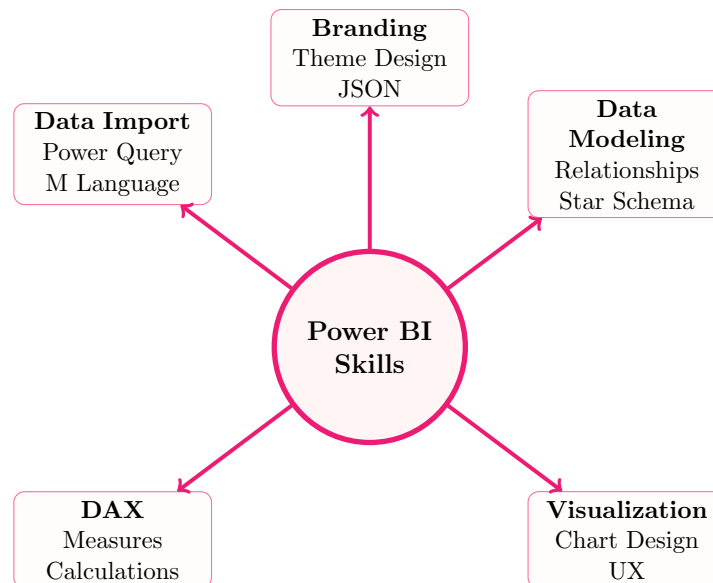


Figure 2: Core Competencies Demonstrated in Project

6 Conclusion

6.1 Project Success Criteria

This Power BI project successfully delivered a production-ready Instagram Performance Analytics dashboard for Sugar Cosmetics, meeting all Phase 1-3 objectives:

- **Data Foundation (Phase 1):** Robust data import pipeline with 50,000+ clean records, proper data types, and optimized modeling
- **Analytical Framework (Phase 2):** Comprehensive DAX measure library enabling flexible KPI tracking and comparative analysis
- **Visual Intelligence (Phase 3):** Professional, branded dashboard with 15+ interactive visualizations providing actionable insights

6.2 Next Steps

While Phases 1-3 deliver a functional dashboard, potential future enhancements include:

1. **Interactive Slicers:** Add date range, post type, campaign type filters across all pages
2. **Drill-Through Pages:** Enable detailed post-level analysis via click-through navigation
3. **Bookmarks & Buttons:** Implement guided navigation and reset functionality
4. **Custom Tooltips:** Rich hover information with additional context

5. **Mobile Layout:** Optimize dashboard for phone/tablet viewing
6. **Publish to Power BI Service:** Enable cloud sharing with stakeholders

6.3 Final Remarks

This comprehensive documentation demonstrates proficiency in end-to-end Power BI development—from raw data ingestion through advanced DAX calculations to polished, branded visualizations. The Sugar Cosmetics Instagram Analytics dashboard exemplifies how modern business intelligence tools transform social media data into strategic assets for marketing optimization.

End of Report

Thank you for reviewing this comprehensive Power BI project documentation.