📊 My Dashboard Creation Journey: Social Media Campaign Performance Tracker

As part of my **Data Science & Analytics Internship at Future Interns**, I completed **Task 2** by building a fully interactive **Power BI dashboard** that analyzes and visualizes social media ad campaign data. Here's the step-by-step breakdown of how I designed, cleaned, built, and delivered this dashboard:

🔍 Step 1: Understanding the Task

The objective was to work with a simulated dataset exported from **Facebook/Instagram Ads Manager** to track and visualize:

- Campaign performance
- Audience engagement
- Key marketing KPIs such as CTR, CPC, and Conversion Rates

The goal was to create a dashboard that would help businesses make data-driven decisions based on ad performance.

🧹 Step 2: Data Cleaning in Power Query

I imported the CSV data into **Power BI** and moved into **Power Query Editor** where I performed:

- Removal of unnecessary columns and null rows
- Standardization of data types (dates, numbers)
- Formatting of columns for uniformity
- Cleaning inconsistent values (e.g., in `ad_id`)

This laid the foundation for building a trustworthy dataset.

➕ Step 3: Derived Columns (KPIs Creation)

To extract deeper insights, I created new columns using **DAX**:

New Column	Formula	Purpose
`CTR`	`clicks / impressions`	Click-Through Rate
`CPC`	`spent / clicks`	Cost Per Click
`conversion_rate`	`total_conversion / clicks`	Funnel performance
`approval_rate`	`approved_conversion / total_conversion`	Lead quality
`campaign_day`	Extracted from `reporting_start`	Timeline filtering
`engagement_score`	`clicks + total_conversion + approved_conversion`	Engagement level

□ Step 4: Sketching the Dashboard Layout

Before building, I **mapped out the layout**:

- Cards at the top for KPIs
- Filters (slicers) in the sidebar
- Charts in the middle: bar, pie, line, area, and stacked column
- Color-coded for clarity and branding

This helped me plan user experience and story flow.

📈 Step 5: Building the Dashboard in Power BI

◆ Cards for KPIs:

- **Total Spent, Clicks, Impressions, CTR, CPC, Approval Rate**
- Used `SUM()` and `AVERAGE()` functions, formatted using percentage and currency

◆ Slicers:

- **Date Range, Age, Gender, Campaign ID, Ad ID, Interests**
- Made visuals dynamically update on filter selections

◆ Charts Added:

Chart	Purpose
Donut Chart	Spend by Gender
Bar Chart	CTR by Age Group
Stacked Column Chart	Daily Trends of Interest Categories (1,2,3)
Area Chart	Daily Engagement Score
Funnel Chart (via DAX Table)	Impressions → Clicks → Conversions → Approvals
Treemap	Engagement Score by Ad ID
Scatter Plot (Optional)	Spend vs Approved Conversions

📊 Step 6: Final Dashboard Output

The final dashboard:

- Responds to slicers in real time
- Allows marketers to assess ad performance by age, gender, and interest
- Tracks how audience engagement shifts over time
- Highlights which ads bring the highest return

It is **visually clean, dynamic, and business-ready**.

□ Skills Applied

- Power BI Desktop
- Power Query for Data Cleaning
- DAX for calculated columns and measures
- Dashboard Design & UX Thinking
- Marketing Analytics & KPI Modeling

🎯 Outcome

This project helped me:

- Improve my DAX and Power BI skills
- Learn how to build a dashboard from raw data
- Think like a marketer and an analyst
- Understand storytelling through visual data

The dashboard is now a ready-to-use asset that can assist stakeholders in tracking campaign effectiveness and guiding ad strategy decisions.
