Project Title: PhonePe Pulse Data Visualization and Exploration

Tools Used: **Microsoft Power BI Desktop, DAX, Power Query**

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1. Summary

This project delivers an interactive Business Intelligence solution using Power BI to visualize and analyze digital payment adoption trends across India, utilizing data sourced from the PhonePe Pulse GitHub repository. The dashboard provides a dynamic tool for tracking **Year-over-Year (YoY) growth**, monitoring **Key Performance Indicators (KPIs)**, and enabling granular exploration of transaction value and volume across various geographic and categorical dimensions.

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2. Project Requirements & Fulfillment

The following table confirms that all mandatory project evaluation metrics have been successfully implemented:

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3. Data Model and DAX Measures

A. Data Integration

The data was imported, transformed, and merged in Power Query (M Language) from multiple JSON files covering transactions, users, and demographics. A dedicated **DateTable** was created and linked to the main data table (Merge DATA) to ensure correct time intelligence and hierarchy (Year, Quarter, Month).

B. Key DAX Measures

The following complex measures were created to drive the primary visualizations:

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4. Interactivity Implementation (10 Filters)

The dashboard provides robust filtering capability via **10 distinct filter visuals** located on **Page 2**. This allows users to drill down from high-level KPIs to specific transactions.

A. Categorical Dropdowns (8)

These filters are configured with the **Dropdown Style** to conserve dashboard space:

1. YEAR
2. QUARTER

3. MONTH NAME
4. STATES
5. trans_type (Transaction Category)
6. Source.Name (Transaction Platform)
7. District (If available, otherwise another categorical field)
8. Metric Selector (A field parameter allowing users to switch the Geo Map visual between **Total Value**, **Total Volume**, and **YoY Growth %**).

B. Numerical Range Filters (2)

These filters are configured to allow users to set a minimum and maximum range, often using the **List/Range Slicer style** to ensure functionality:

9. **Slicer Value** (Filters the data by a range of **Total Value**).
10. **Slicer Volume** (Filters the data by a range of **Total Volume**).

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5. Technical Challenges Overcome

The primary technical challenge encountered during the build was a persistent **Power BI Desktop visual caching glitch**.

Problem: The Slicer visual repeatedly failed to recognize custom DAX measures (Total Value/Total Volume) when attempting to set the filter type to "Between," leading to the error: "This field can't be used because non measure field is required."

Solution: The issue was resolved by creating new measures with a clean context (Slicer Value/Slicer Volume) and using a precise **copy-and-replace field** method on existing, stable categorical slicers to bypass the internal application error.