PhonePe

Pulse Data Visualization and Exploration

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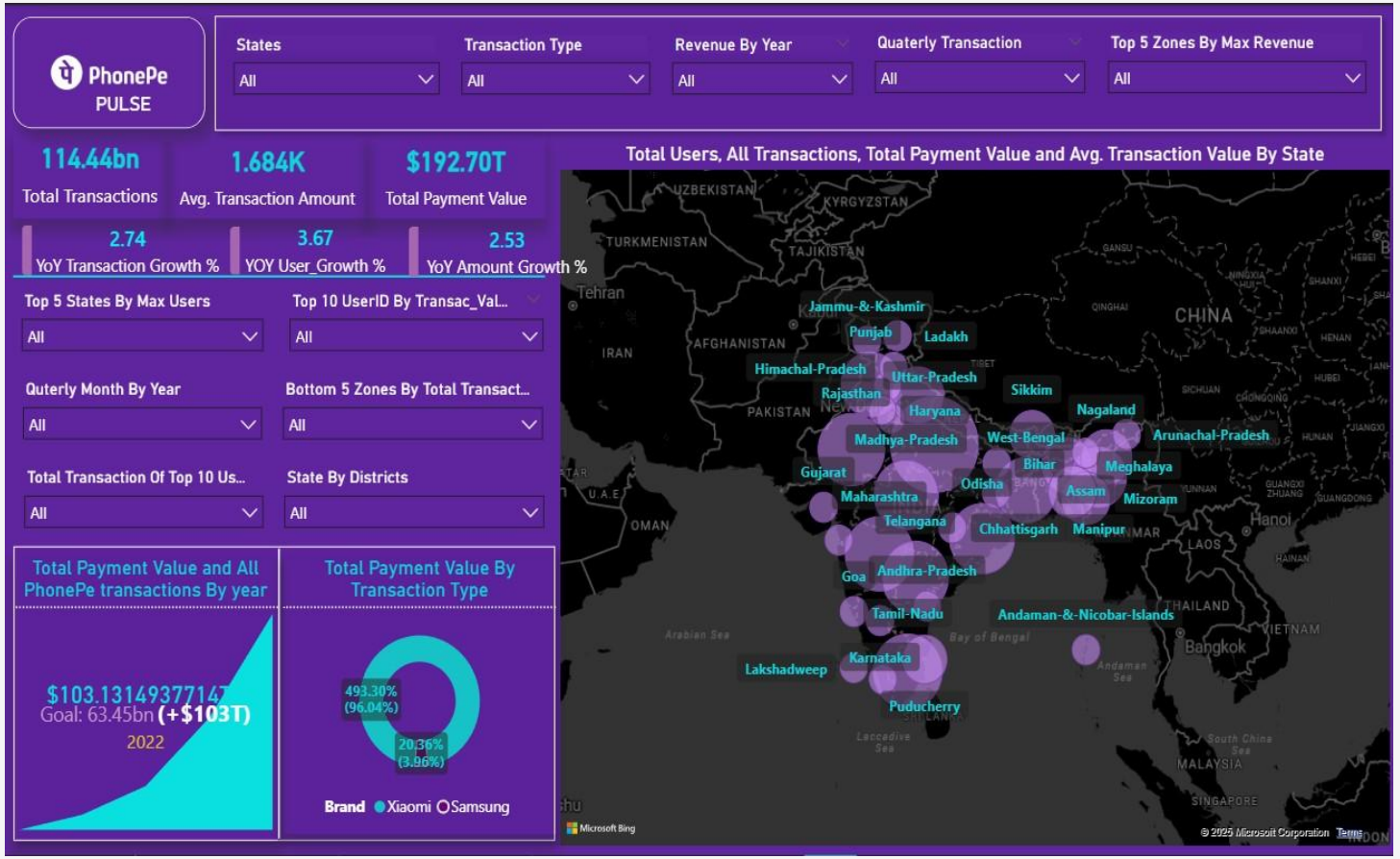
INTRODUCTION

Hello, In this presentation, we will go through the **PhonePe Pulse Data Visualization and Exploration**.

• I appreciate the opportunity given to me to dive into this Real PhonePe data to gain insightful information about the business performance of digital payments in India.

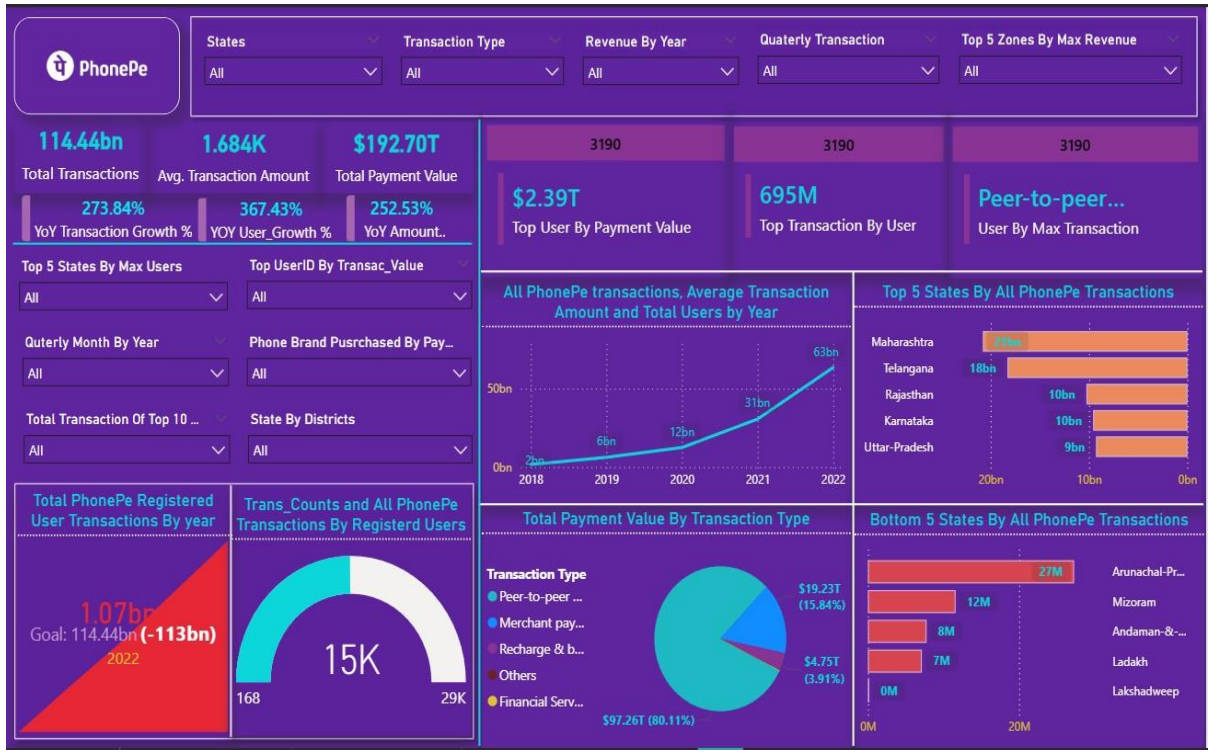
• And How to think from the perspective of business leaders to analyse data more effectively.

This dashboard helps stakeholders evaluate regional performance, monitor growth trends, compare transaction categories, and derive business insights essential for strategic decision-making.



- The rapid expansion of digital payments in India has created an enormous volume of financial and transactional data. PhonePe, one of India's largest digital payment platforms, publishes its transaction insights through the **PhonePe Pulse GitHub Repository**, which includes state-wise and district-wise details on user engagement, transaction volumes, transaction values, and merchant categories.

- This project aims to process, analyze, and visualize the PhonePe Pulse dataset using **Power BI/Tableau**, transforming complex data into a dynamic, interactive, and user-friendly geo-visualization dashboard.

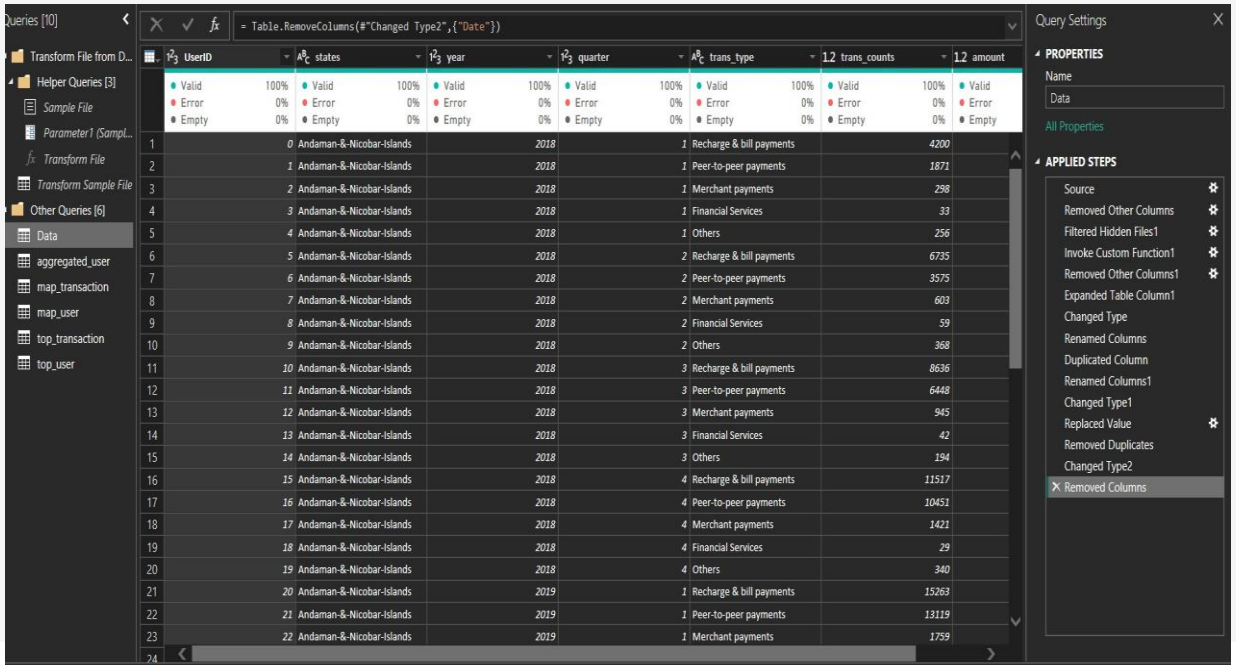


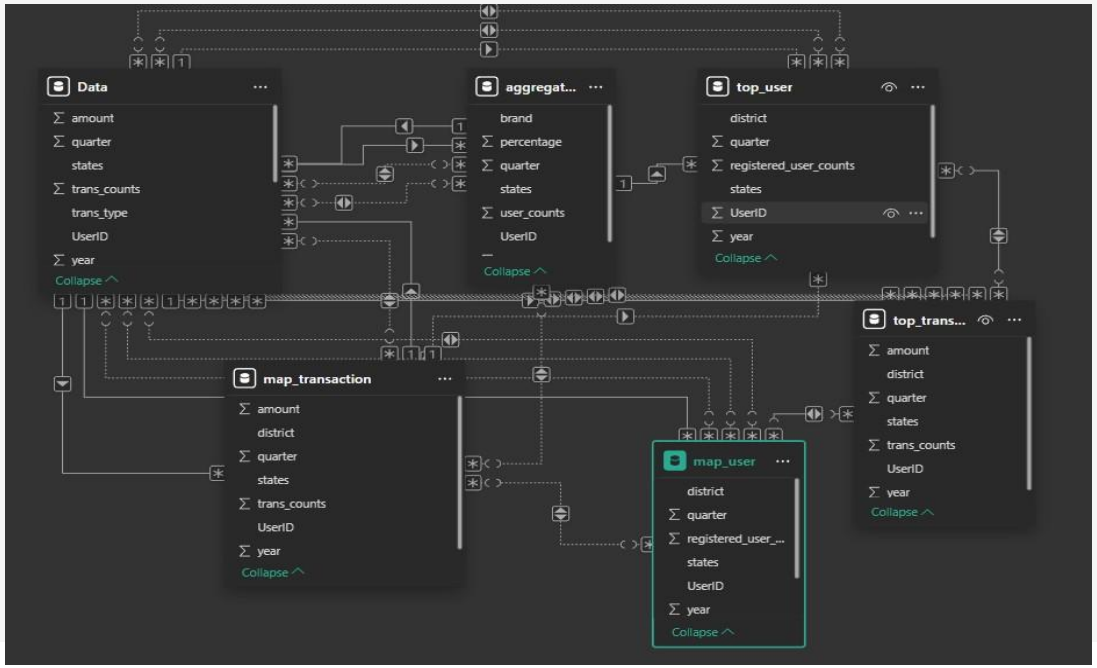
PROCESS

All the necessary steps were taken to ensure that the analysis is accurate and correct.

I also cleaned up the data by addressing any missing or incorrect values, filtering out nulls, and eliminating duplicates to ensure accuracy. I then converted data types, setting numeric fields like Amount into currency format and transform the state column by capitalize each word, while defining Importing & Modeling the data – As I Created a relationships between tables and tables for drill-down using: Year → Quarter → State → District, Category → Subcategory → Transaction type

After that, I created calculated columns to boost my analysis, such as calculating Total Payment Value, Total Transaction, Avg. tansaction, Total Users, YOY Growth % for Amount, Transaction and Users data for all the visualization.





Dashboard Layout

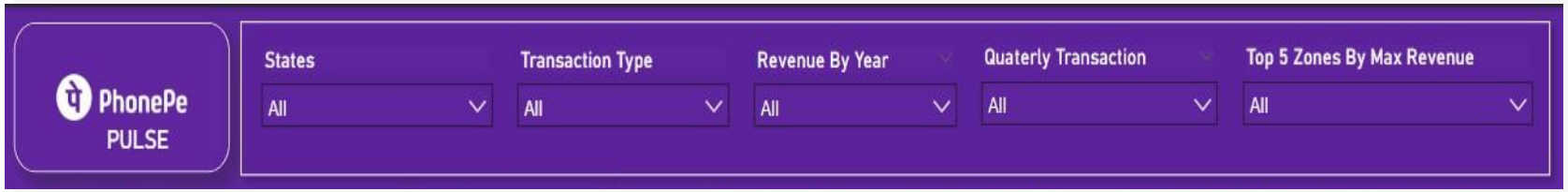
In the Power BI dashboard, the layout is designed to provide a comprehensive overview of the PhonePe Pulse data at a glance.

The KPI cards prominently display key metrics, including the total Transaction, Average Transaction, Total Payment Value, Total Users, YOY Growth % for Amount, Transaction and Users, and On the right side, I included **over 10+ dynamic slicers**.

Over 10+ Dynamic slicers, such as: State, District, Year, Quarter, Transaction Type Category- Device Brand, Merchant Category, Payment Mode, Time Period.

These metrics deliver essential insights into the market's health and ensures that users can explore the dataset with complete flexibility.

At the bottom, I added **analytical visuals** like: Top 10 states and districts, Trend lines across multiple years, Category distribution charts, geo maps for merchant segments.

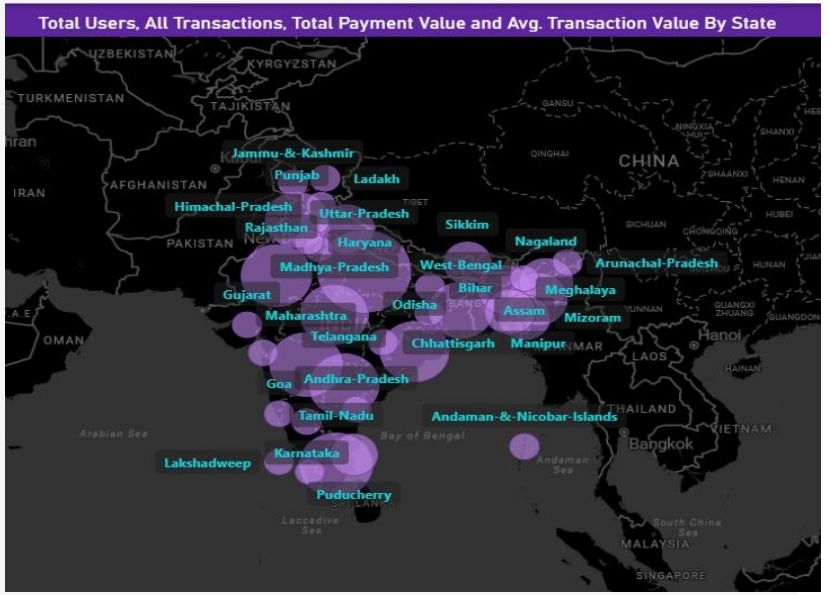


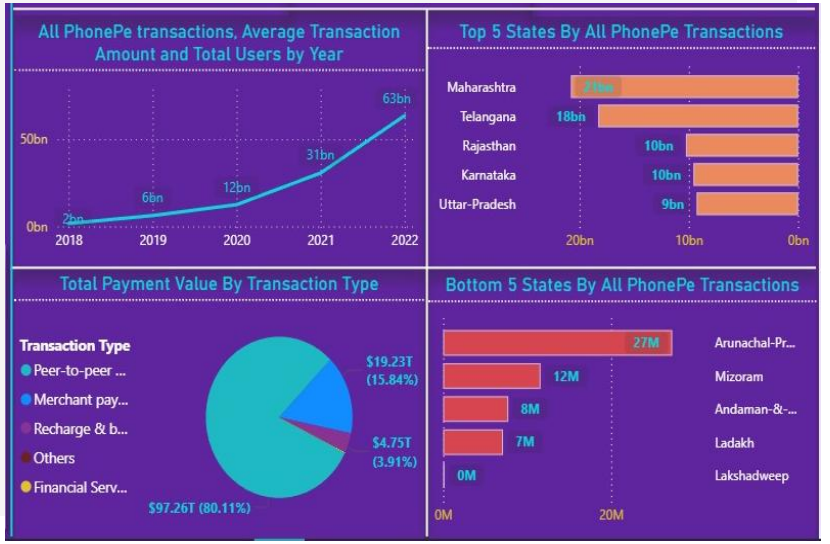
Visual Chart Analysis

The visuals in this dashboard provide a deep understanding of digital payments.

- The **Geo Map** helps identify regions with high and low digital adoption. Darker regions represent higher transaction activity.
- The **Line Trend Chart** shows how digital transactions have grown over the years, especially during major festivals and post-2020 digital adoption surge.
- **Bar Charts** help identify top-performing states such as Maharashtra, Karnataka, Tamil Nadu, and Delhi.
- **Pie and Donut Charts** reveal the distribution of transaction categories — for example, merchant payments, peer-to-peer transfers, recharges, and utility bills.
- **Geo maps** help visualize merchant category contributions.

Together, these visuals create a complete picture of India's digital payment ecosystem





Business Questions Answered by the Dashboard

The dashboard provides answers to a range of business questions, allowing for a detailed understanding of the market. It can be used to answer questions such as:

1. Which states dominate PhonePe transactions by value and volume?
2. What is the YoY and QoQ growth in digital payments in India?
3. Which districts show low digital payment penetration?
4. Which transaction type (P2P, merchant, bills) is used most in each region?
5. What device brands are most used by PhonePe users?
6. Which merchant categories are growing fastest?
7. Which regions offer the highest expansion opportunities?
8. How does user adoption vary across states and time periods?
9. How do transaction values change seasonally?
10. Which states contribute the most to overall revenue potential?

Key Insights & Findings

Regional Insights: Maharashtra, Karnataka, Tamil Nadu, and Delhi consistently appear as top-performing states with the highest transaction values and user base. North-eastern states show **lower transaction volume but steadily improving growth**, indicating untapped potential.

Growth & Trend Insights: Digital payment adoption shows a **consistent upward trend YoY**, especially post-2020. Quarter 3 (festive period) usually exhibits the **highest transaction peak** every year.

Category Insights: Merchant payments (P2M) are rapidly growing and overtaking traditional P2P payments in urban regions. **Utility bill payments** show seasonal patterns aligned with billing cycles.

User & Device Insights: Android devices dominate user device distribution. Premium-device users show **higher average transaction values**, indicating strong potential for targeted premium services.

District-Level Insights: Districts in metro cities lead in transaction density, while tier-2 and tier-3 cities show **fastest YoY growth rates**, suggesting strong market expansion.

Strategic Opportunities: Regions with high population but low transaction usage (e.g., some UP, Bihar districts) represent high-value **growth markets**. Top-performing categories can guide **merchant partnership strategies**.

Suggestions & Recommendations

- **Business Growth Strategies: Focus marketing on low-transaction states** to increase adoption. **Introduce regional cashback offers** where user engagement is low.
- **Product Improvement:** Enhance features around categories with lower engagement. Improve user interface for high-growth regions with rising activity.
- **Expansion Strategy:** Target top-performing districts for merchant partnerships. Expand POS systems in Tier-2 and Tier-3 cities.
- **Data Strategy:** Enable more granular district-level insights. Integrate demographic and socioeconomic data for deeper analysis.
- **Continuous Monitoring:**
- Use KPIs to track:
    - Market share growth
    - User retention
    - Regional competition

Conclusion

- In conclusion, this project successfully transforms the rich PhonePe Pulse dataset into a visually appealing and insightful analytical dashboard.

- It enables businesses and policymakers to make data-driven decisions, understand digital trends, and identify new opportunities for growth.

Thank you for watching my presentation...