



PhonePe Pulse Data Visualization Project

By Aamir Sohail

Introduction

- PhonePe is a leading digital payments platform in India.
- This project visualizes insights from the PhonePe Pulse GitHub data using Python, Streamlit, and Plotly.
- Data is processed from JSON, stored in SQL, and visualized through an interactive dashboard.

About PhonePe Pulse Data

- Aggregated Data – Category-wise payment metrics
- Map Data – State & District-level insights
- Top Data – Top performing States, Districts, and Pincodes
- Data is provided in JSON format

Project Overview

- Goal: Analyze and visualize PhonePe Pulse data for actionable insights
- Tools: Python, MySQL, Plotly, Streamlit
- Data Source: PhonePe Pulse GitHub repository (JSON format)

Technology Used

- Python, Pandas, JSON
- MySQL – For data storage
- Plotly – For interactive visualizations
- Streamlit – To build the dashboard
- Git – Cloning PhonePe Pulse repository

Data Flow

- Extract JSON files → Parse using Python
- Load structured data into MySQL
- Build Streamlit dashboard with Plotly charts
- Analyze trends across states, districts, and pincodes

Dashboard Features

- Bar charts: Transaction value and volume by state/district
- Line charts: User growth over quarters and years
- Pie charts: Device usage share
- Choropleth maps: State-level transaction density
- Interactive filters and dynamic visuals

Business Case Studies

- 1. Decoding Transaction Dynamics
- 2. Device Dominance and User Engagement
- 3. Transaction Analysis for Market Expansion
- 4. User Engagement and Growth Strategy
- 5. Insurance Engagement Analysis

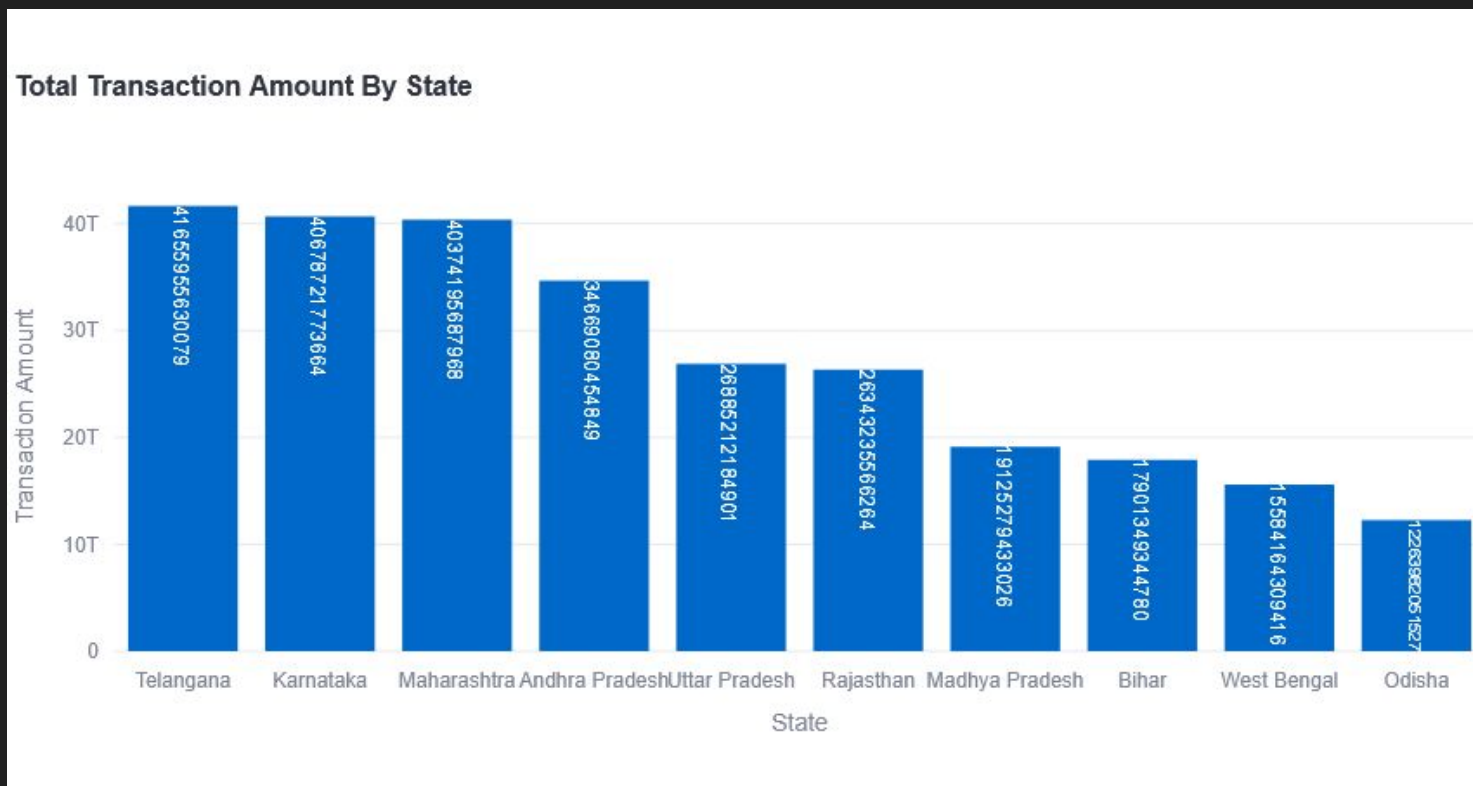
Visualization Types Used

- Bar Charts: State & District level comparisons
- Line Charts: Trends across time
- Pie Charts: Device & Category share
- Choropleth Maps: State-wise transaction mapping
- Stacked & Grouped Charts: Multi-category comparisons

Key Insights

- ✓ Telangana and Karnataka lead in total transaction value
- ✓ P2P and Recharge are the most used transaction types
- ✓ Android dominates device usage across all regions
- ✓ Odisha and Bihar show rapid user registration growth
- ✓ Strong correlation between user engagement and transaction volume
- ✓ Seasonal patterns in Q4 show spending peaks
- ✓ Insurance adoption is high in specific regions
- ✓ Top-performing districts align with urban centers

- Telangana and Karnataka lead in total transaction value



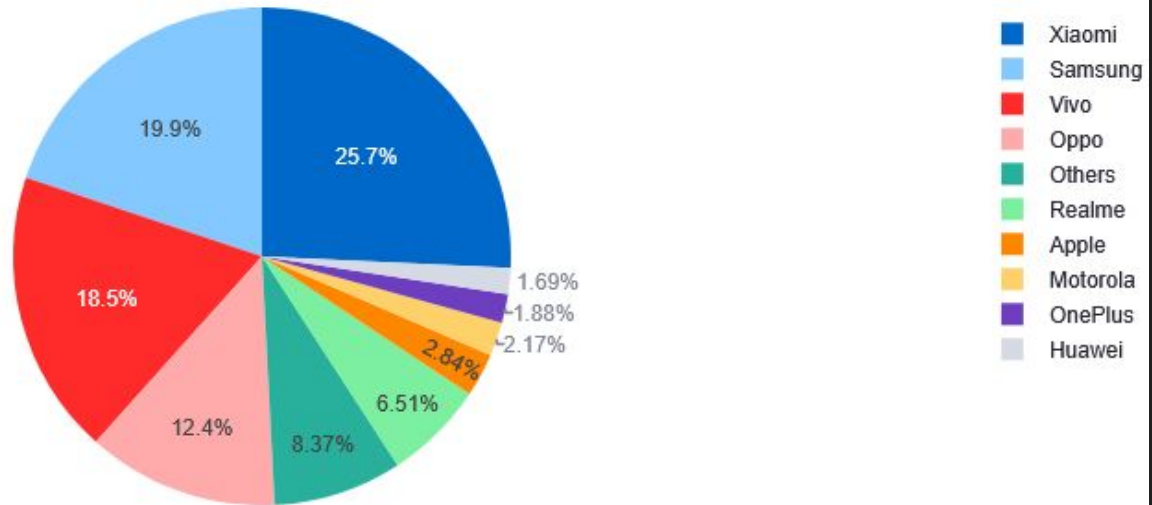
P2P and Recharge are the most used transaction types

Transaction Amount Distribution by Payment Type in Andaman & Nicobar Islands (2018)

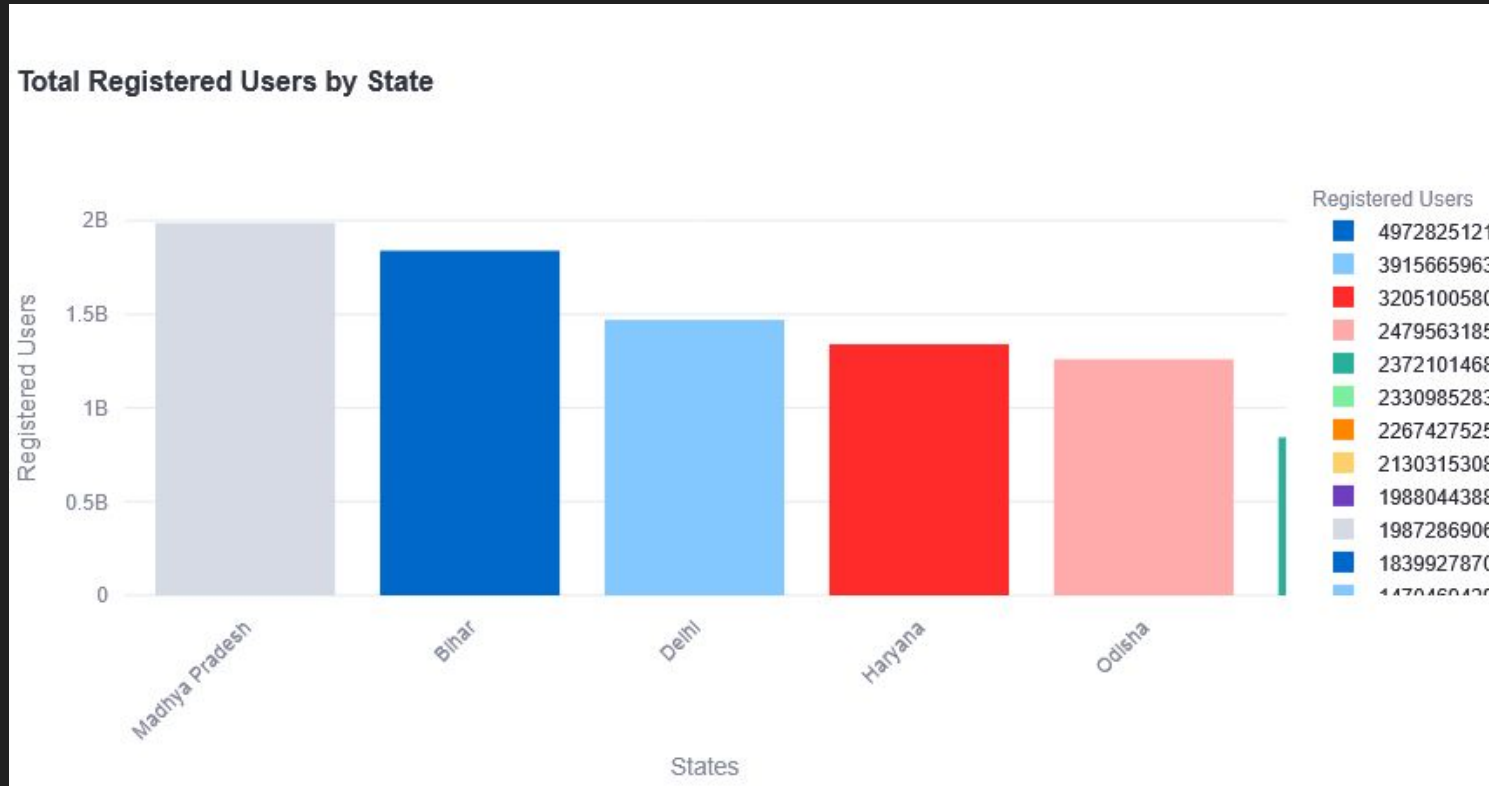


Android dominates device usage across all regions

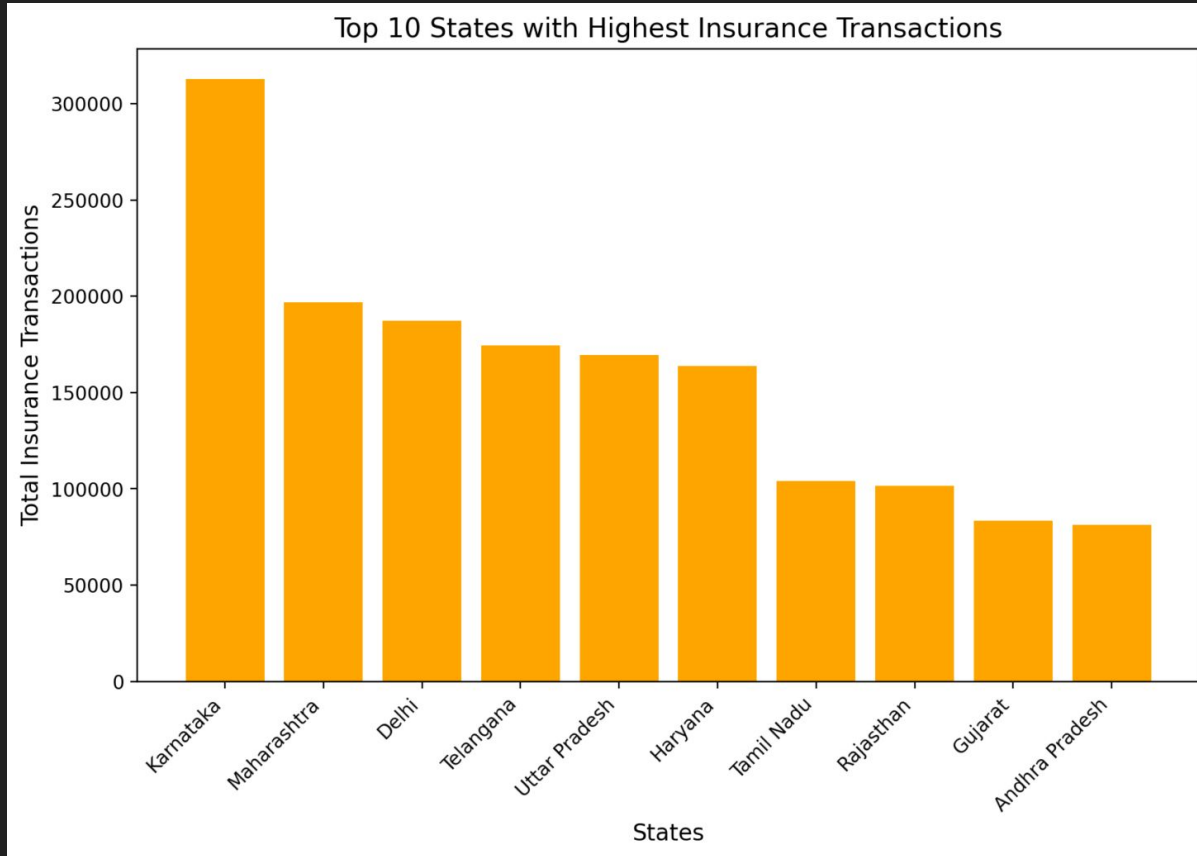
Device Brand Usage Share








Odisha and Bihar show rapid user registration growth



Insurance adoption is high in specific regions



Recommendations

-  Focus growth efforts on states like Bihar and Odisha
-  Continue targeting Android users in campaigns
-  Boost awareness and onboarding in low-performing districts
-  Expand insurance services where usage is already strong
-  Use device and transaction type data for personalized marketing

Conclusion

- The dashboard makes complex data easy to explore and interpret.
- It supports strategic planning using real PhonePe data.
- Interactive visualizations help derive insights at national and regional levels.

Thank You

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