PHONEPE PULSE INSIGHTS

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DOMAIN INTRODUCTION :

DOMAIN: FINANCE / PAYMENT SYSTEMS

- **This Project Explores India's Fast-growing Digital Payment Space, Where People Are Moving From Cash To Instant Online Transactions**
- **Using Data From Phonepe Pulse, It Uncovers How Users, Payments, And Services Are Evolving Across Different Regions Of The Country**

PROJECT INTRODUCTION :

- **PhonePe becoming a part of everyday life, understanding transaction trends, user activity, and insurance data has never been more important.**
- **This project analyzes and visualizes payment patterns, highlighting top-performing states, districts, and pin codes.**
- **It also uses interactive maps and charts to present insights at both state and district levels for better decision-making**

PROJECT OBJECTIVE :

• Study PhonePe Pulse data to understand how transactions, users, and insurance adoption are changing over time.

• Create interactive maps and charts to clearly show payment patterns across states, districts, and pin codes.

• Highlight the top-performing regions and categories to guide better business and service decisions.

• Compare trends across different time periods and payment types to spot growth and improvement areas.

• Share insights that can help make digital payment services more effective and user-friendly

DATA MIGRATION, ELT, AND EDA :

- Extract – Collected raw data from the PhonePe Pulse GitHub repository and used Python scripts to extract it into Pandas DataFrames

- Load – Loaded the extracted DataFrames into the working environment for analysis and visualization

- Transform – Formatted state names in Sentence Case and removed unwanted characters to ensure consistency in visualizations

```python
for i in agg_trans_list:
    state2 = os.path.join(agg_trans_path, i)
    state2_list = os.listdir(state2)


    for j in state2_list:
        years2 = os.path.join(state2, j)
        years2_list = os.listdir(years2)


        for k in years2_list:
            qtr2 = os.path.join(years2, k)
            data=open(qtr2,"r")

            J=json.load(data)
```

```python
df_table1=pd.DataFrame(table_1)

df_table1['states']=df_table1['states'].str.replace('andaman-&-nicobar-islands','Andaman & Nicobar')
df_table1['states']=df_table1['states'].str.replace('-',' ')
df_table1['states']=df_table1['states'].str.title()
df_table1['states']=df_table1['states'].str.replace('Dadra & Nagar Haveli & Daman & Diu','Dadra and Nagar Haveli and Daman and Diu')

df_table1.to_csv('table1.csv',index=False)
```

STATISTICAL TECHNIQUES :
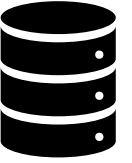
•**Summation and Aggregation:** Calculating total transaction amounts, user counts, and insurance values across different states, districts, quarters, and payment categories using SQL queries and pandas.

•**Trend Analysis:** Comparing quarterly or yearly data to find increases, decreases, or stagnations in transaction volumes and values.

•**Ranking and Filtering:** Identifying top-performing states, districts, and pin codes by sorting aggregated metrics to highlight key regions.

•**Percentage share calculation:** Computing the proportion of transactions by payment type or device category to analyze distribution and dominance

Conclusion :

This project helped me understand and visualize PhonePe's payment data across India. The dashboard shows how transactions and users change over time and across regions, giving useful insights for businesses and users. You can check out the full code and try the app online using the links below ,

GitHup :https://github.com/naveenr-ds/Phonepe_pulse

StreamLit App :naveenr-ds-phonepe-pulse.streamlit.app

BUSINESS SUGGESTION :

- **Partnerships with Local Merchants:**
  Collaborate with popular local businesses and merchants to increase PhonePe acceptance points and exclusive deal.

- **Improve Customer Support:**
  Enhance customer service to promptly address user complaints and build trust, especially in regions showing transaction decline.

- **User Education and Engagement:**
  Run awareness campaigns to educate users about new PhonePe features, security, and benefits, reducing hesitation to transact

- **Communicate Clearly:**
  Explain the reason for fees, emphasizing improved services or features to justify the cost

- **Incentivize Users:**
  Provide loyalty points, cashback, or discounts to offset fees and keep users engaged