Phone Pe Transaction Insights

Business Case Studies

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1. Download Json Files & Load Data into SQL (Python & SQL)

- First the json files were downloaded from the github repository by cloning the repository in the system.
- The downloaded files were then imported into vscode using pandas and os. Which was converted to a dataframe
- The dataframes was then stored as csv files in the system.
- Basic cleaning operation was done to check any disputes in the data.
- The cleaned csv files are then saved.
- MySQL-connector is used to create tables in MySQL.
- Then with the use of SQL Alchemy the cleaned csv files are imported to MySQL to further perform quires.
- The names of the states were changed to keep uniformity among all the tables.

2. Data Extraction & Transformation (MySQL, Python & Streamlit):

- Once all the CSV files are imported to MySQL the data is further studied deeper to answer the required questions and to perform analysis.

- Further required quires are performed in VS Code through python like mentioned to get insights into the data provided.

- The MySQL queries and Python scripts are integrated with Streamlit to build and deploy an interactive dashboard.

3. Dashboard creation using Power Bi :

- After all the data analysis is performed, the data has to be presented using visual tools. For this task Power Bi was used.

- The data was imported to PowerBi directly from MySql.

- Then using the various tools available in PowerBi, 5 interactive dashboards are created for each case study.

- The dashboard consists of different types of visualisation tools used like, line graph, bar graph, slicer, etc.

Case Study :

1) Decoding Transaction Dynamics on Phone Pe :

- The State with the highest transaction amount is Telangana.
- But in between around 2020 second quarter we can see a drastic dip and eventually it has one up immediately . This is mainly due to the corona pandemic.
- The peer-to-peer transaction is the most used for a transaction.
- We can see there is a huge decline in the financial service transaction type.
- Like mentioned there are a few states and transaction types which have been having a consistent increase in transaction amount, while a few states and transaction types have had a decline in transaction amount. When the states were compared it was mainly reflecting on the education levels and the states development.
- More education, the product trust is important to work on the declining states and the transaction types like financial services.

2) Device Dominance and User Engagement Analysis :

- The brand wise registered users Xiaomi is the highest.
- The app opens are similar among a few brands of mobile phones.
- When compared state wise around 31 states Xiaomi, next is vivo with 4 states and finally Samsung with 1 state is the highest registered mobiles.
- The engagement efficiency was found against each brands, it was found that only a very few brands had consistent increase in the engagement, where as brands like apple it has decreased drastically.
- From the above date we get to know that the phone like Xiaomi and vivo which are more accessible to common people has more registered users and app opens as well.
- These phone are comparatively priced cheaper than their counters.
- State wise difference is very less while coming to device but may affect in the user engagement.

3) Insurance Penetration and Growth Potential Analysis :

- The insurance domain is a great new venture of the company.
- The growth trajectory has been incredible with the total amount and total number of policies over the years since started.
- The highest is Karnataka in terms of total insurance amount and number of policies.
- Consistently from 2020 to 2024 the 4th quarter of each year we can see a increased Insurance amount. One of the main reason for this is as it is the financial year end, it would help in tax deductions.
- Ladakh who is a very low performer, has a high insurance value per policy among other locations. Our highest policy holding states are down the chart which shows that the policy value and number of policy are equally high.
- When compared to each states against the transaction and policy amount, Kerela is doing the best out of all states. The other high performing states are way down the chart which shows the potential it has got.

4) Transaction Analysis for Market Expansion :

- Over All through out the country there has been a increase in the transaction amount over the years 2018 to 2024.

- When compared state wise the north east states are some of them with very low transactions amounts, then comes some of the union territories as well.

- Main factors placing them low are, less population, under developed states, lower education levels.

- There is some good potential which could be tapped into these states with some good marketing strategies and some tie up with the government could be done to make then connected to the online banking world, product reach them and trust the product.

- The transaction amount and the number of users were compared, which shows a similar outcome as the above.

- The least popular transaction type is financial services in 20 states and others in 15 states.

- About the financial services, it's a very sensitive area to work on, it will take the user a lot of trust on the product to use it for the financial services. Showing the security and safety features, promoting to improve the trust would increase transactions in financial services.

5) User Engagement and Growth Strategy :

- The State wise registered users chart shows the drastic difference among each states, as well as the improvement over the years.

- Maharashtra is the state with highest registered users, which reflects the high population. Lakshadweep is the state with least registered users, which reflects the low population.

- District with the highest registered users is Bangalore. The state wise highest registered user district is mentioned in the table in the streamlit application.

- From the graph we can see the registered user number has been a liner growth through the years. The App Opens follows an exponential growth through the years.

- Earlier we had seen the brand wise engagement efficiency, this graph shows the state wise engagement efficiency over the years.

- When we see the data state wise there has been an increase, but when compared to other states we can see the difference significantly.

- The user engagement has been constant in developed states. Focusing on Under developed states would make a huge difference.