ML/AI Team 6: Data visualization With Trend Analysis

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Problem Statement:

Data visualization along with Trend analysis using Python /Tableau (any other of your choice).

Summary of Project:

- Android Games on Play Store Dataset was selected for this project.

- The dataset contained 1730 entries along with 15 columns. The dataset contained no null values.
- Unwanted column Price was dropped and installs column was converted to a numerical column. Outliers were also handled.
- The different Game categories were compared on basis of Total Ratings, Installs and their growth in 30 and 60 days.
- The top 3 games in each category by ratings and 20 games in each category by installs were plotted. The paid to free games ratio was compared in the form of pie chart.
- These plots were fitted into a streamlit app so as to view them easily.

Analysis of plots (Order of plots as given in app):

- Plot 1 gives us the count of games in each category.
- Plot 2 gives the mean total ratings of each category in descending order. The highest being 'Game Action' followed by 'Game Casual' and 'Game Strategy'. At the bottom are 'Game Trivia', 'Game Music' and 'Game Educational'. It can be inferred that Action and strategy games and games that involve fighting and some cool graphics are very popular or trending whereas games that involve thinking, General Knowledge or games related to study are less popular. From this we can say that most of users of Play Store are children as they love fighting games.
- Plot 3 gives the mean number of installs for a particular category. The top 3 among them are 'Game Action', 'Game Arcade' and 'Game Casual' and last is 'Game Trivia'. This plot also shows us that most users install action, racing and arcade games. There are also a many users that like playing games like puzzles, board games, adventure, etc. There are very few players who like playing card games or casino games.
- Plot 4 is a pie chart of paid vs free games. We can see that only 7 games out of 1730 are paid whereas rest are free.
- Plot 5 gives us mean growth of each game category in 30 and 60 days. This plot gives a very different result than previous plots. This shows that 'Game Educational' category may not have a lot of ratings but has the highest growth. 'Game Action' even though has the max ratings and installs is almost half in growth of 'Game Educational'. This means 'Game Action' games gain popularity in a later stage maybe after 60 days whereas 'Game Educational' becomes popular when it's new but loses its popularity after. This can explain its less installs and ratings. 'Game Casino', 'Game Racing', 'Game Role Playing' and 'Game Trivia' have a greater growth in first 30 days then in later 30 days.
- Plot 6 gives top 3 rated games of each category. The most rated game across all categories is 'Garena Free Fire-World Series' from 'Game Action' category followed by 'Clash of Clans' from 'Game Strategy'.

- Plot 7 gives us the installs of top 20 games in the dataset. The most installed being ‘Subway Surfers’ from ‘Game Arcade’ and ‘Candy Crush Saga’ from ‘Game Casual’ with 1000 million installs followed by ‘Temple Run’ from ‘Game Arcade’ with 500 million installs.

From the above plots, it can be concluded that ‘Game Action’, ‘Game Arcade’ and ‘Game Casual’ are the top 3 most trending game categories on Play Store.

Github Repository:

https://github.com/shardul1501/kubixsquare_ml_team6