**Mobile Strategy Games in Apps store (Apple)**

**Problem statement**

* Related to which industry domain area and work – Media and Entertainment

**Dataset Details**

* Number of Observations (Rows and Columns) - How many are there
* What are all the metrics we have
* Number of categories, Time dimensions (monthly, yearly) - Time dimensions are available

**Possible Business Scenario to explore**

* Descriptive analytics - Product wise, Year wise
* Predictive analytics - Numerical
* Linear or Logistics Regression - Correlation analysis - dependencies metrics

**Conclusion summary**

* Finding Results
* Evaluations
* Conclusion

**Abstract**

In this modern time and society, the mobile games industry is worth billions of dollars. Companies are spending vast amounts of money on the development and marketing of these games to an equally large market. One of the most popular and favourite genre of mobile games is Strategy Games. By utilizing this data set, we’re going to create some insights and prediction of what is the components of the most popular Mobile Strategy Games in Apps Store (Apple) which can be used by developers and companies to create insights and planning’s on creating their Mobile Strategy Games.

**Problem statement**

From the 17K mobile strategy game database performing analysis on subcategory. We take the number rating as proxy indicator for the overall success of game and then workout what factors make successful game.

**Explanatory Analysis**

* Genre – Number of games falls on the genre and their game list
* developer – Genre used by each developer their list of games keywords used by them in their game description
* Title of the game – description keywords used for the particular game

**Predictive analytics**

* X variable – developer, user rating count, age rating
* Y variable – average user rating

To predict average user rating, we’re using regression models with help of independent variables such as developer, user rating and age rating

**Dataset Details**

This dataset has a lot of data about mobile apps, including the rating. What we don't know is when and why an app will get a good rating.

The goal of this task is to train a model that can predict the average user rating of an app. Bonus points if that model isn't just a black box, but can explain why that is. Usage to any means for this explanation (correlations, general EDA, model weights and so on)

A quick explanation what type of model you're training and any thoughts about your approach

Steps to actually train the model

An evaluation of accuracy using mean absolute error

The number of observations records in the dataset as No. of rows – 17007, No. of columns - 18

**There are several variables that are included in the data, such as:**

**url:** the link to the app through the App Store.

**id:** the ID of the app in the App Store.

**name:** the name of the app.

**subtitle:** the secondary text under the name.

**icon url:** url to the app's icon image.

**average user rating:** the average user rating of the app, rounded to nearest, 5.

**user rating count:** the numbers of user rating the app have obtained internationally.

**price:** the price of the apps in the App Store (USD).

**in app purchase:** prices of available in app purchases.

**description:** a quick description of the app.

**developer:** the team that develops the app.

**age rating:** the age ratings of the app.

**languages:** the languages the apps use.

**size:** the size of the apps (bytes).

**primary genre:** the main genre of the app.

**genres:** genres of the app.

**original release date:** when the app was released.

**current version release date:** when the app was last updated.

**What are all the Metrics**

We are going to use Pandas, Numpy, Scikit-learn, Scipy, Matplotlib, Plotly, Seaborn.

**What type of charts and visualizations?**

* Correlation metrics - heatmap chart
* Description of the games – word cloud plot
* gender - pie chart
* Individual developer with their counts of games - Bar chart
* Average user rating, user rating count - Scatter plot

we are going to use NLP techniques to visualize description of the games in a word cloud plot.

we will be implementing Deep learning techniques to increase the accuracy and performance of the prediction model.

**Number of categories**

Numerical and categorical data types

**Possible Business Scenario to explore**

Descriptive analytics - Statistical and graphical analysis

* Genre – Game in each genre
* Developer – Types of genre used by each developer
* List of game falls in each genre
* List of games falls for each developer

**Predictive analytics – Numerical**

* X variable – developer, user rating count, age rating
* Y variable – average user rating
* Linear Regression- Correlation analysis - dependencies metrics

**Prediction Model**

The rating that can be achieve from the game by the developer, based on their genre and number of votes for the game.

To predictive average user rating using regression models with help of independent variables such as developer, user rating and age rating

Classification analysis – Based on the game type or genre.

Text Mining – Categorical (Description of the game)

* Description – word cloud plot to identify word use to describe each game.
* game name – input, output - description key words – word cloud plot
* developer – input, output – the description key words use for their game – word cloud plot

**Conclusion Summary**

**Finding Results**

Predict highly rated games

A good submission will highlight predatory developers (making high cost, low quality games) and also allow a reader to explore the different developers’ ratings and cost models.

**Evaluation**

Based on the result we will evaluate the task.

Evaluation will be by mean absolute error. But subjective bonus points for a good explanation

**Conclusion**

There are a lot of things (or variables) that can affect the popularity of an app (in this case Mobile Strategy Game). In this research, we are going to create a model that can help us solve the quest of creating the most popular Mobile Strategy Game.