REPORT ON OPTIMIZING REVENUE

1. How would you increase the overall revenue for an app?

2. Are there any discrepancies in the data set shared with you? What are the possible reasons for such mismatch?

3. If you had a classification mechanism, which apps would you classify as Tier 1 or Important category for GG? Explain your reasoning.

4. Are there any ad groups which are causing an opportunity loss for the app? If yes, how would you mitigate it?

1. Ads make up a major proportion of an apps revenue. By considering different perspective on showing ads to appear better for the user thereby prompting user to make more Ad Requests/2nd Click. Its possible to increase an apps revenue significantly. Some steps to enhances the performance of ad shown on apps are to

Use User – Friendly Ads
Start by making sure that you use only attractive formats for your ads. Some of the most effective types of ads are:

Rewarded Video Ads – the win – win – win situation when users receive something valuable for continuing their adventure inside your app, brands present their products, app owners increase their revenue and app retention;
Interactive Ads – when ads are presented like a game or a form of entertainment users don't have the impression that you want to sell them something. While they spend their time in a playful way they are more willing to complete their purchases.
Native Ads – ads that complement the style of your app offer you more chances to engage your users and to increase their interest for the items offered.

Filter Ads To Relevant Audience
No matter how engaging are the ads displayed inside your app if their content doesn't match your users' needs then your chances to maximize your ROI are zero to none.

Improve eCPM Rate
When you are looking to increase your revenue you must focus on increasing also the value received for serving 1000 impressions ie, by maximizing eCPM without damaging the user experience.

Test The Performance
Instead of assuming that your strategy is on the right track you have to follow accurate data to be sure about your progress. In case things don't evolve as you planed you have to optimize your activity according to the results received.

2. Rummy games are a most popular category among people who used to spend time with mobile game apps. But Rummy app mentioned in the dataset had only 1614 rows compared to World Cricket Championship 2 (3270 rows).
Reason : Maybe the dataset mentioned only data of a particular month (September 2020). Considering the overall dataset may be producing a different set of results.

3. From the analysis of the dataset major proportion of revenue producing apps data comes mainly from 5 Apps.They are
1. Callbreak Mulyiplayer
2. World Cricket Championship 2
3. Bottle Shooting Game
4. World Cricket ChampionshipLtd
5. Indian Rummy Office

The other different apps numbers to 237 produces the rest of dataset . Since the major portion of app data being from the listed 5 apps which shows wide popularity and acceptance. So these game apps can be classified as Tier 1 or important category for GG that are capable of generating more revenues through ads displayed to the user.

4. From the analysis of Variable - Ad Group it can be seen that the major five Ad generating Ad groups which contributes to data set comes mainly from 5 games.That are
1. revshare
2. Dhani Backfill
3. Rooter_All apps
4. MYCircle_IN_SG_1500
5. IPL banner

It is evident that the other Ad Groups that falls in the lower range of dataset does not contribute much revenue through ads. So by mainly focusing on increasing the quality and development of Ad groups that occupies the topmost section the effectiveness of Ad Group can be increased. Also Ad group contributes to major portion of missing data in the dataset ie 3993 rows(8.3%) which amounts to significant portion of entire dataset which increases the chance of lost oppurtunity. Missing or corrupted data in a dataset can be mitigated using the methods mentioned below based on the type of missing data present in dataset.

Method 1 is deleting rows or columns.
We usually use this method when it comes to empty cells.

For example, if the majority of our data is missing for a column or for a row, we can simply delete them.

Method 2 is replacing the missing data with aggregated values.
In this case, we can calculate the aggregated value based on the rest of the values we have in the column and put the received number to the empty spot.

Method 3 is creating an unknown category.
Categorical features have a number of possible values, which gives us an opportunity to create one more category for the missing values. This way we will lower the variance by adding new information to the data. This could be used when the original information is missing or cannot be understood,

Method 4 is predicting missing values.
where we have no missing values, we can train a statistical or machine learning algorithm in order to predict the missing values. Since among the samples for which this training is performed, there are missing values, it is necessary to replace them initially using one of the simplest methods for recovering gaps. This way will give us better performance, unless, of course, a missing value should have a high variance. If we have a bigger table, with more rows with similar information — the same states, Ad Groups, and Apps — it is possible to calculate correctly the most possible result for the missing feature. In this case, even if we didn't guess absolutely right.