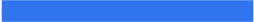


## DATA ANALYST ASSIGNMENT : Optimising for revenue

Being an Ad Network, GreedyGame(GG) offers an SDK solution to developers to integrate interesting Ad Formats. Once integrated, GG runs real time bidding auctions to determine which is the right Ad for a particular App on every Ad Request. You have been presented with some randomised data sample for a week in September, 2020. The data definitions of the associated fields are listed below:

Field	Description
App	Name of the application that is integrated. This is unique to identify a particular mobile app
Ad Group	An ad group represents an actual ad. This contains creative assets like Images, Title etc for a particular company/product. An Ad Group is served in response to an Ad Request
State	The state to which this data is attributed to. This is available only for India. The state field for countries other than India will be marked as N/A or Unresolved.
Revenue	Total revenue in USD made by the app
Ad Requests	The number of times an ad has been requested by the App
Ad Responses	The number of times has the AdNet responded with an Ad for a particular ad request
Impressions	When the ad has been served to the mobile device, it needs to be shown on the screen. Once the ad is displayed on the device screen, it is counted as an impression
1st Click	After the impression is rendered, the user can click on the ad to open a bigger pop up to know more about the ad content. This event is counted as first click
2nd Click	On the bigger pop up, if the user decides to interact more and go to the advertiser's website/app, that is counted as second click
Fill Rate	% of Ad Responses on Ad Requests
Render Rate	% of Impressions on Ad Responses



You are requested to analyse the sample dataset associated and find the answers to the following questions. The answers should be collated in a final report that you can share and submit across as a PDF/any other medium, detailing your process of analysing the data and insights. Any interesting insights or patterns do carry an extra weight on the overall evaluation.

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?

### **Submission Procedure**

You can use any tech stack for analysing the problem as you see fit. If you have some code/notebooks that you have prepped, please make sure that you include the link for the repo as a part of your submission. Please make sure that you don't upload/commit the dataset or this problem statement.

Once you have prepared your findings, please respond to the original email, with your solution and the repo links (if any). For any doubt or clarification, do reply on the same email/medium that you got the assignment on.

All the best!

