AppThis LLC, 3001 Brighton Blvd, Suite 730, Denver, CO 80216

Applicant Project: Stats for Data Analysis

We would like for you to write for us a small analytics application. This will involve importing some relational data and creating a web page which will show us some basic stats of the data set provided.

Attached is file with several thousand records which will serve as the data set. You are free to use any programming language, database, library, etc. as you feel is necessary to get the job done. Analysts have been kind enough to provide us with an Excel file showing samples of what the data should look like (more or less).

Below are 4 tasks we'd like for you to perform using the sample data set:

1. Overall Publisher Report

- Programatically generate a breakdown of impressions, conversions, and conversion rate by publisher (conversion rate = conversions / impressions)
- Default the sort order by impressions in descending order
- Columns should be sortable

2. 30-day Report

- Programatically generate a breakdown of impressions, conversions, and conversion rate by day (conversion rate = conversions / impressions)
- Default the sort order by day in ascending order
- Columns should be sortable
- Add a filter to select a date range to limit the query results

3. Performance by Day Graph

- For the sake of this exercise we will define “performance” as “conversion rate”
- Programatically generate a graph showing which platform performs best for each day across the data set (refer to the Excel file for an example graph)
- X-axis = day; Y-axis = conversion rate; there will be 3 lines representing each platform (ignore “Other” platform)
- There might be some outliers, how will you handle them?

4. Add Filters to the Performance by Day Graph

- Add a filter allowing us to change the graph results for a specific country
- While you're at it, add another filter allowing us to filter by a particular publisher

Additional Information

- Your source code will be judged. We are looking for clean, readible, and sound code
- We will put special emphasis on SQL queries. Make them clean and fast
- State your assumptions, ask questions, etc.
- Making things look pretty is a plus

Technical Requirements

- You may use any language, framework, backend database, library, as you feel you need to make the project function
- We must be able to execute the web page easily via a URL. It's recommended that you host the application and make it availble to us – this might be on a small AWS instance, Service Platform (Heroku), or the like
- Provide us access to the source code via GitHub, BitBucket, or another repository