Introduction

Apxor is an advanced product analytics solution that answers the toughest of your product questions, effortlessly. App developers can get the reasons behind users dropping off, uninstalling and more. Apxor also provides tools that act in this rich context to enhance user experience in the app by contextually nudging them with walkthroughs, tooltips and more.

Problem

With more than a million apps in app stores, chances of an app to succeed are slim. To help app developers a platform that monitors multiple signals about app usage and alert deviations in realtime is needed. You will be given time series data of different indicators (leading and lagging) which will comprise of information regarding users, usage, performance of the app etc. You need to build a solution to monitor these indicators for deviations and alerting system on top of it.

Why solve this problem?

For most of the apps, 80% of users uninstall them in the first week, leaving very little scope to achieve success. Time to improve / iterate is very critical for success of apps. Automatic alerting mechanisms that work on top of the critical metrics will help developers to iterate fast.

Ideal solution should alert developers (over email / SMS/ slack / telegram or any other means) with insights like:

On 28th Of July 2019, 'Purchases' are 102305 - 38% than expected.

Sat, 03 Aug 2019 11:10:18 - Network failures are 22% higher, total 3389 in last 1 hour.

Solution Format

Mandatory

The solution should consist of a presentation (either ppt or pdf) which explains the core idea behind your solution.

Following aspects have to be clearly demonstrated in idea and prototype:
  a) Collection of data (at scale)
  b) Near real time Anomaly detection model (typically involves prediction of time series data with deviation rules) that can be deployed on online models.
  c) Notification mechanism with clear alert message (that is easily understood and informative)

Optional

We highly recommend that you also submit a prototype code which demonstrates what you plan to do.

Integration to Analytics platforms (Fabric / Firebase / Google analytics etc.,) is good to have.

Evaluation Criteria

Your solutions will be judged on the following criteria:-
a) Online Model – 35 points
b) Working Prototype – 35 points
c) Handling scale – 15 points
d) Multiple integrations (email / SMS / Slack etc.,) – 15 points

Any app developer who has a basic understanding of his users data (use some analytics) should easily use your solution and get alerts !

A note from Apxor:

Sample data sets will be provided to build prediction / anomaly detection models. You may use any open source libraries (facebook's [prophet](#) is quite robust in forecasting).
Make sure the model you build can be deployed online and can work at scale !

Points To Note

1.) Please make sure that your presentation has a slide which contains your
registration number, your name, etc.
2.) As your solutions will be evaluated in your absence, we request you to make
your presentation as informative as possible and if possible include a F.A.Q.s
section in your presentation.
3.) If you are attaching any sort of prototype code along your presentation make
sure that you write what exactly is the code supposed to do and how to execute
it.