BUSINESS INTELLIGENCE TEAM

CANDIDATE ASSESSMENT

novibet

DATA SCIENTIST ASSESSMENT

Duration: 4 Days

Deliver to: emilatou@novibet.com

novibet

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Data Scientist

The Problem

Novibet offers online sports betting and casino entertainment, in many competitive markets. In order to provide our customers with a great gaming experience we are looking for ways to optimize our product and personalize customer's experience following a data driven approach. To do that, we need to better understand our database. Novibet's casino manager in Greece comes to you and asks for some analysis and predictions about our casino players in the country. What she needs, is your insights on our database, so that she can better understand where we can improve. Examples of questions she would like to be addressed:

- Are there any games that are more/ less "popular" compared to others?
- Are there any games that are more/ less "profitable" compared to others?
- How would you group our customers?
- What is the expected value of those groups/ customers?
- What is the expected value per casino game?

In this challenge, we ask you to come up with solutions and predictions that could potentially help the Casino department to make decisions and optimize our customer's experience.

Datasets

You can find the datasets for this exercise at:

https://drive.google.com/drive/folders/1zOXR9Z51U67KmTD2mbY4LlqBgeS-B0-T

The first CSV file "Casino Users.csv" contains the below fields:

userid	ID of the user
Birthdate	Date of Birth
ZipCode	Zip code
CountryName	Name of origin
Sex	Sex
StatusSysname	Current Status
Registration date	Date of registration
City	City

Second CSV file "Customer Wallet.csv" contains:

WalletActionId	Wallet ID
UserProfieId	ID of the user
Type	Type of action
TypeSysname	Name of action
Amount	Amount of action
MethodSysname	Name of method
Created	Date of action

Last file is called "Casino games.csv" contains:

Casino provider	Casino game
IsLiveID	Is it a live game or not (where 0 is no)
UserID	ID of the user
IsJackpotWinID	Jackpot Win (where 0 is no)
IsFreeSpinID	Free spin ID (where 0 is no)
Date	Date of the transaction
Hold	Amount

Task: Casino recommendations

The goal of this task is to design and implement a solution that provides Casino team with recommendations on how to optimize our product in Greece.
Within Novibet we use Python (3.x), R and SQL. Also, we use open-source visualization tools like Tableau and Data studio for visualization purposes, so we suggest preferring them before using another programming stack.
However, if there is another tool that you feel familiar with, please feel free to use it on this exercise.
Your need to provide us with:

- A script that can be easily run from us
- A small presentation with your insights, recommendations, and predictions.
- A public GitHub repo that does not contain any obvious naming (to avoid other candidates copying in). Just use some random dictionary words to name your repo.

Evaluation

Your work will be assessed based on your solution, presentation, and code structure level. We will evaluate your work based on the following points:

- Your depth of knowledge over the algorithms you applied along with the quality of your code.
- Structure of your solution
- Problem solving skills and creativity presented in your work
- Communication (can you unambiguously explain your approach to future colleagues)

We care about your ability to create a data driven solution that is useful for end users. The result should fit that description.

Please do not hesitate to contact Giorgos (gathanasiadis@novibet.com) and/ or Sifis (ikyriazis@novibet.com) if you have further questions.

Good luck!