



JOB-A-THON - November 2021

Online 19-11-2021 12:00 AM to 21-11-2021 11:59 PM

7633
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Instructions:

- 1st Assessment is MCQ - Skill Test
- You will have 2 attempt for the MCQ test
- The Skill test will have 30 questions with each question having a timer of 60 seconds.
- The questions will come from four subjects - Python, SQL, EDA & Statistics and Machine Learning
- Please attempt all the questions, there is no negative marking.
- 2nd Assessment is ML Hackathon.
- Only after giving the Skill test once, you will be able to download the data set and make submissions.
- Though you will be able to read the problem statement for the Hackathon even before giving the Skill test
- Once Assessment is given, your rank will be displayed in the Leaderboard.

Assessment 1: Skill Test -MCQ

SkillTest Attempts left: 1

START ASSESSMENT TEST

Predicting Employee Attrition

In recent years, attention has increasingly been paid to human resources (HR), since worker quality and skills represent a growth factor and a real competitive advantage for companies. After proving its mettle in sales and marketing, artificial intelligence is also becoming central to employee-related decisions within HR management. Organizational growth largely depends on staff retention. Losing employees frequently impacts the morale of the organization and hiring new employees is more expensive than retaining existing ones.

You are working as a data scientist with HR Department of a large insurance company focused on sales team attrition. Insurance sales teams help insurance companies generate new business by contacting potential customers and selling one or more types of insurance. The department generally sees high attrition and thus staffing becomes a crucial aspect.

To aid staffing, you are provided with the monthly information for a segment of employees for 2016 and 2017 and tasked to predict whether a current employee will be leaving the organization in the upcoming two quarters (01 Jan 2018 - 01 July 2018) or not, given:

1. Demographics of the employee (city, age, gender etc.)
2. Tenure information (joining date, Last Date)
3. Historical data regarding the performance of the employee (Quarterly rating, Monthly business acquired, designation, salary)

Data Dictionary

Train Data

Variable	Definition
MMMM-YY	Reporting Date (Monthly)
Emp_ID	Unique id for employees
Age	Age of the employee
Gender	Gender of the employee
City	City Code of the employee
Education_Level	Education level : Bachelor, Master or College
Salary	Salary of the employee
Dateofjoining	Joining date for the employee
LastWorkingDate	Last date of working for the employee
Joining Designation	Designation of the employee at the time of joining
Designation	Designation of the employee at the time of reporting
Total_Business_Value	The total business value acquired by the employee in a month (negative business indicates cancellation/refund of sold insurance policies)
Quarterly Rating	Quarterly rating of the employee: 1,2,3,4 (higher is better)

Test Data

Variable	Definition
Emp_ID	Unique Id for the employees

Sample Submission

This file contains the exact submission format for the predictions. Please submit the CSV file only.

Variable	Definition
Emp_ID	Employee ID

	0: if the employee does not leave the organization,
Target	1: if the employee leaves the organization

Evaluation Metric

The evaluation metric for this competition is macro [f1_score](#)

Guidelines for Final Submission

Please ensure that your final submission includes the following:

1. Solution file containing the predictions for the Emp_ID in the test set. (format is given in sample submission CSV)
2. A Zipped file containing code & approach (Note that both code and approach document are mandatory for shortlisting)
 - Code: Clean code with comments on each part
 - Approach: Please share your approach to solve the problem (doc/ppt/pdf format). It should cover the following topics:
 1. A brief on the approach, which you have used to solve the problem.
 2. What data-preprocessing / feature engineering ideas really worked? How did you discover them?
 3. What does your final model look like? How did you reach it?

Public and Private Split

Test data is further randomly divided into Public (40%) and Private (60%) data.

- Your initial responses will be checked and scored on the Public data.
- The final rankings would be based on your private score which will be published once the competition is over.

Submission Tutorials:

How to Make a Submission?

- All Submissions are to be done at the solution checker tab.
- For a step by step view on how to make a submission check the below video

How to Make a Submission on DataHack



How to Set Final Submission?

How to Set your Final Submission on DataHack



Hackathon Rules

1. *The final standings would be based on private leaderboard score.*
2. Setting the final submission is recommended. Without a final submission, the submission corresponding to best public score will be taken as the final submission
3. Use of external data is prohibited
4. Use of ID variable is not allowed as part of the model
5. You can only make 5 submissions per day
6. Entries submitted after the contest is closed, will not be considered
7. The code file pertaining to your final submission is mandatory while setting final submission
8. Throughout the hackathon, you are expected to respect fellow hackers and act with high integrity.
9. Analytics Vidhya holds the right to disqualify any participant at any stage of the competition if the participant(s) are deemed to be acting fraudulently.
10. Use of multiple Login IDs will lead to immediate disqualification

Support

Data

[Test File](#)[Train File](#)[Sample Submissions](#)

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