

Evaluating ML Models Task

You are provided with a dataset that contains information whether a credit card is approved or denied according to individuals information including: income, number of children, car ownership, house ownership and gender.

Data Team should do the following with the training dataset *credit_card_train.csv* uploaded in the task folder:

1. Construct a classification model pipeline that classifies whether an individual credit card is approved.
2. Consider the following factors while constructing the model: performance, bias, variance, fairness, and model interpretability.
3. Specify how you considered each factor while training the model?
4. Code an API that takes the instances as input and outputs the predictions as output (the request body and response formats are at the end of the page).

Data Testing Team should do the following with the testing dataset *credit_card_test.csv* (will be shared with the data testing team after the deadline of the data team members):

1. Generate the predictions of each of the data team members models constructed using the API constructed.
2. Evaluate the model according to the following: performance, bias, variance, fairness, and model interpretability.
3. Write a report summarizing which model is better and why?

The data team should share their repos with the data testing team to be able to test their models providing a descriptive readMe file to ease the process for them.

Deadlines:

1. Data Team: 31st October at 11:59 pm
2. Data Testing Team: 15th November at 11:59 pm

Request Body Example:

```
POST /predict
Content-Type: application/json
{
  "Num_Children": [1, 2],
  "Gender": ["Male", "Female"],
  "Income": [40690, 41696],
  "Own_Car": ["No", "Yes"],
  "Own_Housing": ["Yes", "No"]
}
```

Response Example:

```
HTTP/1.1 200 OK
Content-Type: application/json
{
  "predictions": [1, 0]
}
```

Note: In the predictions, 1 indicates that issuing the credit card is approved and 0 indicates that issuing the credit card is denied.

Submission Guidelines: For the submission, send me privately your submission on Teams or send me an invitation to your repo using the following email: reemayman5299@gmail.com