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# Finding Donors for CharityML

## REVIEW

## HISTORY

### Meets Specifications

Congratulations on completing the project 🏆

All your implementation in this submission is great and meets the rubric expectation 🙌

You have done an awesome job on the discussion sections too 😊

Keep up the Impressive work; All the best for the rest of the nano-degree and for all your ML endeavors 📄: +1:

### Exploring the Data

Student's implementation correctly calculates the following:

- Number of records
- Number of individuals with income >\$50,000
- Number of individuals with income <=\$50,000
- Percentage of individuals with income > \$50,000

### Preparing the Data

Student correctly implements one-hot encoding for the feature and income data.

### Evaluating Model Performance

Student correctly calculates the benchmark score of the naive predictor for both accuracy and F1 scores.

Good Job correctly calculating the scores

The pros and cons or application for each model is provided with reasonable justification why each model was chosen to be explored.

Please list all the references you use while listing out your pros and cons.

Student successfully implements a pipeline in code that will train and predict on the supervised learning algorithm given.

Student correctly implements three supervised learning models and produces a performance visualization.

## Improving Results

Justification is provided for which model appears to be the best to use given computational cost, model performance, and the characteristics of the data.

Student is able to clearly and concisely describe how the optimal model works in layman's terms to someone who is not familiar with machine learning nor has a technical background.

The discussion is great and meets all the necessary requirements.

The final model chosen is correctly tuned using grid search with at least one parameter using at least three settings. If the model does not need any parameter tuning it is explicitly stated with reasonable justification.

Student reports the accuracy and F1 score of the optimized, unoptimized, models correctly in the table provided. Student compares the final model results to previous results obtained.

## Feature Importance

Student ranks five features which they believe to be the most relevant for predicting an individual's' income. Discussion is provided for why these features were chosen.

Student correctly implements a supervised learning model that makes use of the `feature_importances_` attribute.

Additionally, student discusses the differences or similarities between the features they considered relevant and the

Additionally, student discusses the differences or similarities between the features they considered relevant and the reported relevant features.

Student analyzes the final model's performance when only the top 5 features are used and compares this performance to the optimized model from Question 5.

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