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Identify Fraud from Enron Email

REVIEW

CODE REVIEW

HISTORY

Meets Specifications

You did an excellent work addressing the concerns and suggestions from a previous reviewer, well done. Your reaction to the erroneous feedback is justified and balanced.

Receiving feedback positively and reacting appropriately to it is an essential skill in most professions, but it is of particular importance for Data Analysts.

It was a pleasure reviewing your work; I wish you a lot of success in your career as a Data Analyst/Scientist.

Quality of Code



Code reflects the description in the answers to questions in the writeup. i.e. code performs the functions documented in the writeup and the writeup clearly specifies the final analysis strategy.

The code perfectly supports the conclusions presented in the report.



poi_id.py can be run to export the dataset, list of features and algorithm, so that the final algorithm can be checked easily using tester.py.

Understanding the Dataset and Question



Student response addresses the most important characteristics of the dataset and uses these characteristics to inform their analysis. Important characteristics include:

- total number of data points
- allocation across classes (POI/non-POI)
- number of features used
- are there features with many missing values? etc.



Student response identifies outlier(s) in the financial data, and explains how they are removed or otherwise handled.

Excellent, the script now clearly remove the outliers.

Optimize Feature Selection/Engineering



At least one new feature is implemented. Justification for that feature is provided in the written response. The effect of that feature on final algorithm performance is tested or its strength is compared to other features in feature selection. The student is not required to include their new feature in their final feature set.



Univariate or recursive feature selection is deployed, or features are selected by hand (different combinations of features are attempted, and the performance is documented for each one). Features that are selected are reported and the number of features selected is justified. For an algorithm that supports getting the feature importances (e.g. decision tree) or feature scores (e.g. SelectKBest), those are documented as well.

Excellent use of advanced features, it is the first time I see your selection approach in the projects I have reviewed. That might explain why the previous reviewer missed it, thank you very much for the clear explanation you provided in the student notes.



If algorithm calls for scaled features, feature scaling is deployed.

Pick and Tune an Algorithm



At least two different algorithms are attempted and their performance is compared, with the best performing one used in the final analysis.



Response addresses what it means to perform parameter tuning and why it is important.



At least one important parameter tuned with at least 3 settings investigated systematically, or any of the following are true:

- GridSearchCV used for parameter tuning
- Several parameters tuned
- Parameter tuning incorporated into algorithm selection (i.e. parameters tuned for more than one algorithm, and best algorithm-tune combination selected for final analysis).

Validate and Evaluate



At least two appropriate metrics are used to evaluate algorithm performance (e.g. precision and recall), and the student articulates what those metrics measure in context of the project task.



Response addresses what validation is and why it is important.



Performance of the final algorithm selected is assessed by splitting the data into training and testing sets or through the use of cross validation, noting the specific type of validation performed.



When tester.py is used to evaluate performance, precision and recall are both at least 0.3.

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