UDACITY

PROJECT

Machine Learning Capstone Project

A part of the Machine Learning Engineer Nanodegree Program

PROJECT REVIEW

CODE REVIEW

NOTES

SHARE YOUR ACCOMPLISHMENT!

Requires Changes

3 SPECIFICATIONS REQUIRE CHANGES

Hey,

You've done a great job in updating the project from last time. A few small tweaks are still needed to further enhance the report. I'm sure the next submission will be accepted. Keep at it!

Definition

Student provides a high-level overview of the project in layman's terms. Background information such as the problem domain, the project origin, and related data sets or input data is given.

Good job giving a compelling introduction to the project. You should also mention the project origin and related academic work on the problem domain.

The problem which needs to be solved is clearly defined. A strategy for solving the problem, including discussion of the expected solution, has been made.

The problem is stated clearly but the strategy to solve it should also include the names of the main techniques that would be used to solve this problem.

Metrics used to measure performance of a model or result are clearly defined. Metrics are justified based on the characteristics of the problem.

Relevant metrics are selected and justified. You should also include the formulas used for calculating these metrics.

Analysis

If a dataset is present, features and calculated statistics relevant to the problem have been reported and discussed, along with a sampling of the data. In lieu of a dataset, a thorough description of the input space or input data has been made. Abnormalities or characteristics about the data or input that need to be addressed have been identified.

You have done an excellent job in analyzing the dataset thoroughly and providing some exploratory statistics as well as discussing the characteristics of the dataset. The visuals were a nice addition to this section!

A visualization has been provided that summarizes or extracts a relevant characteristic or feature about the dataset or input data with thorough discussion. Visual cues are clearly defined.

These are some very interesting visuals to explore the correlations within the data.

Algorithms and techniques used in the project are thoroughly discussed and properly justified based on the characteristics of the problem.

While there is some very good discussion of the models used, you also need to justify the reason for choosing them. The justification for their choice should be tailored to the problem and the dataset.

Student clearly defines a benchmark result or threshold for comparing performances of solutions obtained.

You seem to have picked a relevant benchmark here. The benchmark is quantifiable and the corresponding scores are reported.

Methodology

All preprocessing steps have been clearly documented. Abnormalities or characteristics about the data or input that needed to be addressed have been corrected. If no data preprocessing is necessary, it has been clearly justified.

Nice job documenting the pre-processing steps in detail.

The process for which metrics, algorithms, and techniques were implemented with the given datasets or input data has been thoroughly documented. Complications that occurred during the coding process are discussed.

The process followed has been documented in detail. You also need to discuss any complications that you faced while coding up the project and how you resolved these complications.

- Were there any complications with the original metrics or techniques that required changing prior to acquiring a solution?
- Was there any part of the coding process (e.g., writing complicated functions) that should be documented?

The process of improving upon the algorithms and techniques used is clearly documented. Both the initial and final solutions are reported, along with intermediate solutions, if necessary.

This section should also contain the scores obtained from applying each refinement technique applied. This would help the reader compare the enhancements from the default implementation. You should also present the final model architecture for the neural network.

Results

The final model's qualities — such as parameters — are evaluated in detail. Some type of analysis is used to validate the robustness of the model's solution.

The model parameters are evaluated in detail and the scores from them are compared to choose the best performing model. The robustness of the model is also discussed and proved. Well done!

The final results are compared to the benchmark result or threshold with some type of statistical analysis. Justification is made as to whether the final model and solution is significant enough to have adequately solved the problem.

The obtained results are compared with the benchmark and seem to outperform it. You have also done well in commenting on the model's applicability on real world datasets.

Conclusion

A visualization has been provided that emphasizes an important quality about the project with thorough discussion. Visual cues are clearly defined.

Nice work using appropriate images to explore the final model characteristics.

Student adequately summarizes the end-to-end problem solution and discusses one or two particular aspects of the project they found interesting or difficult.

You have mentioned the interesting aspects of the project but you also need to summarize the project. This would be an end-to-end description of the entire project which includes stating the problem you set out to solve, the strategy adopted to solve it and the final solution adopted. In short, this would be a description of the workflow that you followed, which summarizes the entire project.

Discussion is made as to how one aspect of the implementation could be improved. Potential solutions resulting from these improvements are considered and compared/contrasted to the current solution.

Quality

Project report follows a well-organized structure and would be readily understood by its intended audience. Each section is written in a clear, concise and specific manner. Few grammatical and spelling mistakes are present. All resources used to complete the project are cited and referenced.

The report is well structured and easy to read. All references have been cited and referenced.

Code is formatted neatly with comments that effectively explain complex implementations. Output produces similar results and solutions as to those discussed in the project.

While the code blocks are described clearly in the ipython notebook, it would be better if you could include more comments in the actual code itself. Comments are helpful for maintaining the code and for readibility.

RESUBMIT

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