Meets Specifications

Good selection of project for capstone proposal, challenging and not an easy choice!!! Its was fun and interesting read. Well researched problem domain. Excellent work explaining problem statement, dataset inputs, solution, evaluation metrics, benchmark and design approach to address dog breed classification problem.

Well done on each section documentation, that's reflect the hard work you did to finish this proposal!! Want to congratulate you for getting this far and finishing important milestone towards completing this nanodegree program.

Wish you all the best for final capstone machine learning project!!

Project Proposal

Student briefly details background information of the domain from which the project is proposed. Historical information relevant to the project should be included. It should be clear how or why a problem in the domain can or should be solved. Related academic research should be appropriately cited. A discussion of the student's personal motivation for investigating a particular problem in the domain is encouraged but not required.

Good work on problem background!! CNN are state of art algorithm for image recognition and classification task. Well done referencing the related academic research. Your personal motivation to work on this case study is justified.

Student clearly describes the problem that is to be solved. The problem is well defined and has at least one relevant potential solution. Additionally, the problem is quantifiable, measurable, and replicable.

From the problem statement it is clear that task is to detect dog and estimate the canine's breed and to detect the human face and estimate the resembling dog breed. Well done!!

Student clearly describes a solution to the problem. The solution is applicable to the project domain and appropriate for the dataset(s) or input(s) given. Additionally, the solution is quantifiable, measurable, and replicable.

Good work on solution approach!! Leveraging transfer learning is good approach as model will be faster to train and optimized.

The dataset(s) and/or input(s) to be used in the project are thoroughly described. Information such as how the dataset or input is (was) obtained, and the characteristics of the dataset or input, should be included. It should be clear how the dataset(s) or input(s) will be used in the project and whether their use is appropriate given the context of the problem.

Good work mentioning the number of images, number of output classes and size of images. Would recommend to discuss the different characteristics of images with respect to size and background.

A benchmark model is provided that relates to the domain, problem statement, and intended solution. Ideally, the student's benchmark model provides context for existing methods or known information in the domain and problem given, which can then be objectively compared to the student's solution. The benchmark model is clearly defined and measurable.

Good work choosing CNN model developed from scratch as benchmark model. Benchmark process can be simple model algorithm or naive solution approach. Idea is to establish initial results upon which further improvements can be made in final model solution to assess the relative improvements.

Student proposes at least one evaluation metric that can be used to quantify the performance of both the benchmark model and the solution model presented. The evaluation metric(s) proposed are appropriate given the context of the data, the problem statement, and the intended solution.

Good work selecting Accuracy as evaluation metric and explaining how its evaluated with equation. Well done justifying the selection of this metric.

The proposal 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 and referenced are properly cited.

Well organized proposal document!!

Student summarizes a theoretical workflow for approaching a solution given the problem. A discussion is made as to what strategies may be employed, what analysis of the data might be required, or which algorithms will be considered. The workflow and discussion provided align with the qualities of the project. Small visualizations, pseudocode, or diagrams are encouraged but not required.

Good work summarizing the key steps you plan to implement in this project. Would recommend applying data augmentation on images such as RandomRotation, Horizontalflip etc to reducing overfitting in the network.

Well done citing references.

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