Machine Learning Engineer Challenge

Description

As part of our recruitment process, we would like to evaluate your skills by giving you a coding challenge. We will be focusing particularly in the area of image classification. Your goal is to build a classifier between 4 classes of dogs, given only 20 images per class. We will evaluate it later with some more images of those 4 classes, **and then try to predict a new class named "other", which we don't include in the dataset**.

The problem is purposely open-ended to mimic what you may encounter when dealing with professional projects. We are looking to evaluate your understanding of the concepts involved, your familiarity with the usual frameworks and tools available, and finally your creativity to come up with novel approaches for this particular project. Feel free to add as much explanation as you want as part of the solution.

Results are important as well (because clients will care about them!). Our suggestion is to create a basic approach as a baseline and then explore other alternatives. You are free to use any library at your disposal, but not APIs, and we expect you to spend less than 4 hours on it.

The data is organized in the following way:

- /pento-ssr-challenge
    - /dogs
        - /french_bulldog
            - 20 images
        - /german_shepherd
            - 20 images
        - /golden_retriever
            - 20 images
        - /poodle
            - 20 images

You can download the images from the following link.

You should create:

- Python script, notebook or colab with your analysis and a classifier.

    - It should be able to handle classifying other images besides the 80 images given
- Optionally:
    - Documentation on your decisions and tests, but don't spend too much time on it, we will discuss them at a later point.
    - Documentation on things you wish to clarify when running your code.

Submission and next steps:

Version your code using Git and push your solution to a GitHub repository (inviting https://github.com/gonzachiar and https://github.com/JPSoteloSilva).

If your submission is successful, you will be invited to an in-person interview, where you will present your solution, discuss the challenges you faced and possible modifications that could be made.