Instituto Superior de Agronomia, ULisboa

Green Data Science

Practical Machine Learning/Aprendizagem Automática Aplicada

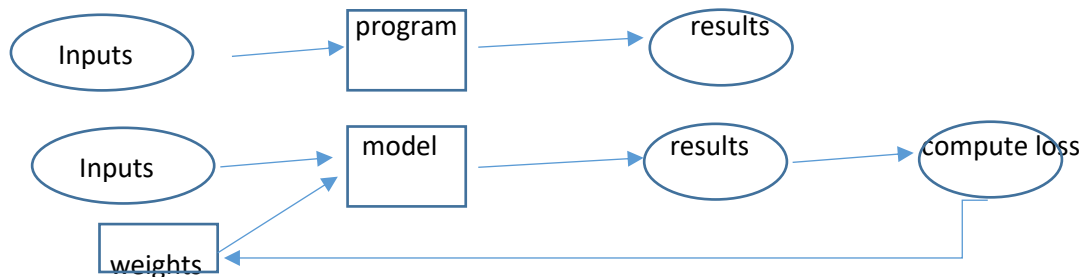Questionnaire #1, February 24, 2023 - One proposal for the solution

Name:_____

1. What is the difference between classification and regression?

R: In classification the response variable is categorical, while in regression it is continuous

2. Suppose you want to create an image classifier, and your examples are digital images of apples (1 image per file) which are labelled "healthy", "scab" or "blotch". How would you conveniently organize your files?

R: One could create a "data" folder with three subfolders names "healthy", "scab" and "blotch", and store each example in the corresponding folder.

3. Consider the following two diagrams, where one of them represents an expert system classifier and the other one a machine learning classifier. Indicate over the diagrams where the following terms should go: "model", "program", "results", "weights", "compute loss".

4. Which sentence is correct?
   a. Loss is computed over the whole dataset
   b. Loss is computed over the training set
   c. Loss is computed over the validation set (x)

5. Give an example of a image classifier that is applied to an input which is not made originally of photos

   R: One exemple: Image: movement of the mouse; label: event that requires the use to to something with the mouse. Second example: Image: representation of sound (frequencies); label: type of sound.