Creating a custom object detection

These instructions can help you to implement a machine learning algorithm that decides if a car has a scratch or not.

Labeling of the images

For this way of implementation, you do not need explicitly labeled data. It is enough if the data is separated into two folders for example “scratch” and “no_scratch”.

Developing the custom object detection

#Imports

Import all useful libraries for your implementation

For example, use “keras” or “torch” for your model layers and image data generator

#Global variables

Use global variables to define the height and width of your images, the image path, the number of samples, epochs, and the batch size

#Define your model

Use the optimal layers and number of layers to get the best results

#Compile your model

Before you train your model, you must compile it with the right optimizer

#Generate your train and test data

Use a data generator to generate your data for the training and testing of your model

#Train and test your model

Finally, train and test your model

Do not only change your model if the accuracy is not so well but also tune the hyperparameters.