

AN2DL: Homework - Image Classification

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In the .zip file we included the two notebooks we used to perform image classification both with and without using transfer learning.

Basic_CNN.ipynb is the one where we don't use TL and which got the score of 0.64600.

Transfer_Learning_CNN.ipynb instead is the one where we exploit TL and through which we got the score of 0.95800.

We didn't provide the JSON file with the images we use for validation since we choose them automatically using a fixed seed.

The approach we chose was to start without using transfer learning, trying to improve the score as much as possible. Once we reached the best we could, we moved to transfer learning, trying to optimize our model as much as possible. For what concerns transfer learning, we tried to use different models and noticed inceptionV3 was the one which gave us the best result.

In both notebooks the first cells were added to make everything work with Google Colab, importing a .zip file containing all the images from Google Drive.

At the beginning and in the code of the notebooks you will find some comments about the decisions we took.