Project proposal

Problem to investigate:

-geo-localization of images, interesting for several applications including national security but also applications involving tourism.

Readings:
for the aim of the project papers about geolocation will be examined:

- "PlaNet - Photo Geolocation with Convolutional Neural Networks" , Tobias Weyand, James Philbin et al. (https://arxiv.org/pdf/1602.05314.pdf)

- "Geolocation Estimation of Photos using a Hierarchical Model and Scene Classification", Eric Muller-Budack, Kader Pustu-Iren et al. (http://openaccess.thecvf.com/content_ECCV_2018/papers/Eric_Muller-Budack_Geolocation_Estimation_of_ECCV_2018_paper.pdf)

Dataset:
-Yahoo Flickr Creative Commons 100 Million dataset

Proposed methods:
- due to reduce resource,the aim of the project is to train a similar network explained in Eric Muller-Budack's network (with similar approaches) but with much less training set size. The purpose is to experiment how CNNs working on geolocation react with not huge amount of data and how good performances are by applying different kind of layers on the last ones of the network.

Evaluation:
-results will be evaluated qualitatively and quantitatively by comparing accuracy and losses (Cross entropy) of the same network but with different final layers. For the results the Im2GPS3k dataset will be used.
http://www.mediafire.com/file/7ht7sn78q27o9we/im2gps3ktest.zip/file

Cetera Clemente s257234

Attilio Drago s265715

Domenico Cefalo s267569