Image Retrieval for Visual Geolocalization: Extensions and Experiments

Francesco Gaza s315489, Giovanni Monco s315001, Erika Spada s318375

Abstract

In this paper, some additional features to a framework made for Visual Geo-localization (VG) are proposed to build, train, and test a wide range of commonly used architectures, with the flexibility to change individual components of a geo-localization pipeline. The research aims to explore new methods and combinations of techniques to improve results and performances. In detail, some experiments are carried out to test various optimizers in combination with different schedulers, with the aim of choosing the optimal learning rate. Then, multiple retrieval losses are analysed and various miners are tested to select more informative batches, thus improving the learning process. An implementation and testing of a naïve proxy miner is also included in the project.