GIS - Geographical Information Systems

This git repository contains the teaching material for the course.

The material is organized as follows

- the **slides**: the slides of the course by topic in a printable pdf format.
- **Instructions.pdf**: detailed instructions to carry out the excercises
- **Docs**: a few useful documents
- **GPX**: some GPX tracks to play with
- **Maps**: digital images for georeferencing experiments

I uploaded on Vimeo the following screencasts that illustrate some of the excercises:

- OpenStreetMap
  - Create features on OSM (a point, a line, an area)
- QGIS
  - Map creation with OSM raster,
  - a new layer added with one point,
  - point attributes management
- uMap
  - Features creation,
  - adding links,
  - images and movies in the description,
  - sharing and downloading data
- Georeferencing
  - georeferencing a hand-drawn map in png format over a OSM raster using qGis

The hands-on activities are based on the following software, that you should install respectively on you PC and on your smartphone:

- **QGIS**: you can download it from here and install on your PC. The recommended version is 3.18.3 'Zürich', available for Linux/Mac/Windows: other versions are OK as well but may display a slightly different interface.
- **Gaia GPS**: you find it on the App store for your smartphone (Android or iOS). I found an old manual which in the Docs directory of this repository.

In order to carry out the practical activities you also need to create an account to the following web services (free account):

- OpenStreetMap
- uMap (here use your OpenStreetMap account created above)
- GaiaGPS
- Stackblitz (here you need to create a gitHub account if you do not have already one)
- Firebase (no need to create an account if you have a Google one)