Indoor Positioning System

We (William Paciaroni, Giacomo Menchi, Matteo Guerrini) worked together on this system.

We understood data inside Xml and Log file, then we parsed them using a Python script (we translated C++ script into a Python one).

We proceeded taking beacons data that are available on both files (Xml and .csv), we converted timestamp into seconds, then we calculated the distance using RSSI formula and finally we proceeded with circle intersection and clustering in order to obtain a cluster point for each set of beacons (We grouped beacons per timestamp).
Finally, we plotted cluster points and beacons on the map we got from the xml file.

The result is the following:
- Yellow circles are the circles built using distance as radius and landmarks as centre
- Magenta dots are the cluster points
- Red dots are the beacons

As you can see neither beacons nor cluster points are on the sun. Probably there are some errors on the beacons coordinates or on the map coordinates.

The result is the following: