map\_loader.py is a function class (to be used on Map class objects) for saving- and loading Map tracks.

The saved tracks are Excel files that contain a table of cones. The excel layout is automatically generated by the python ‘pandas’ library. To save data in this user-friendly way, the data (the cone list(s) in the Map class) must first be converted to a pandas ‘dataframe’ object. The reverse is done for loading files, as the pandas library also provides tools for retrieving datframe objects from Excel files, which are then converted (back) into the Map class cone list(s).

It is possible to load and save files on ‘instances’ that use remote-visualization. When instructed to save a file, the PC running the ‘instance’ will first save it locally, and then attempt to transmit it to the PC running the visualization. File loading is handled similarly, where both PCs will store a copy of the (same) file, before the PC running the ‘instance’ attempts to load it. (This remote file handling code is a part of mapRecvSock.py and mapTransSock.py)

Note: the starting position and orientation of the car is assumed to be constant, and therefore not stored in the track files.