**Introduction/Business Problem**

The Florianópolis city is marked by its large number of beaches. These beaches vary in size and infrastructure. Some are considered deserted, with few shops around, where the option is just to enjoy nature. Others are already marked by having great infrastructure, have a variety of hotels, restaurants and clubs. This project aims to define the level of infrastructure for each beach in Florianópolis. For this, a clustering of the beaches will be performed based on the number of places found around each beach. In this way, an eventual tourist will be able to identify which beach he would like to stay on, be it on a quieter beach, or on a beach that offers more options for activities.

**Data**

For the selection of Florianópolis beaches, the name of the beaches provided by the Guia Floripa website (https://guiafloripa.com.br/turismo/praias) will be used.

Then the foursquare API data will be used, which returns a list of locations close to the corresponding search location.The surroundings of each beach will be explored. For that, we will need to access the foursquare API. We will use the get –venues-explore method.

A function will be defined to access the foursquare API and find information about the places near each beach. So that the function return gives us a dataframe, which contains the location found next to each beach, with the description of the latitude and longitude of each venue, the name of the venue and the category of the venue.