Introduction/Business Problem

1.1. Description of the Problem

Cape Town Stadium in Cape Town, South Africa has been chosen by World Rugby to host the eighth edition of the Rugby World Cup Sevens. This is set to take place in 2022. The aim of this project is to help visitors visualize the area in terms of restaurants that will fit their unique needs or requirements.

1.2. Discussion of the Background

In 2014, The New York Times and The Daily Telegraphy both named Cape Town as the best place to visit in the world. Cape Town has previously hosted world tournaments such as 1995 Rugby World Cup as well as the 2010 FIFA World Cup. At the last event saw more than 300000 overseas visitors flocking to the South African shores for the last world event, we can estimate and increase to up to 500000 visitors for the Ruby Sevens tournament.

Cape Town is South Africa's most cosmopolitan city, and boasts a number of unique restaurants with cuisine from all over the world.

It will be a bit of a challenge for visitors to find the closest restaurants to them as many websites can be confusing and may not always offer the best recommendations.

The question is, How can we leverage Foursquare API data and Machine Learning to help us find the best restaurants for each visitor in Cape Town?
In this project, Foursquare location data and clustering methods will be used to group the different suburbs (or districts) according to their restaurant information.

2. Description of the Data

For this project, we will need the following data:

i)   A list of Suburbs (districts) in Cape Town with their street codes

Data Source: https://en.wikipedia.org/wiki/List_of_Cape_Town_suburbs

Description: We will use the above list to get the list of all the suburbs in Cape Town and hopefully those nearest to Cape Town Stadium.

ii)   **Restaurants in each of the suburbs (districts) in Cape Town**

Data Source: Foursquare API

Description: These will help us get all the restaurants in each neighborhood. This can also be filtered to show restaurants nearest to Cape Town stadium, where people can dine before their favorite game and then be able to walk to the stadium to avoid traffic on the road.