# Background

Today there is tendency to people of all ages be fitness. Metropolitan cities like New York and Paris have millions of persons living there or visiting every year.

“All progress takes place outside the comfort zone.” Michael John

# Business Problem:

The present of the Gym across the city is an important part of a healthy city. The idea of this project is to categorically segment the neighborhoods of New York and France into major cluster. Looking for important insights of their fitness centers. The goal is to find the top picks rating, further examination might reveal relationship between price are ranting and perform cluster of Gym by price and location.

This project will be implementing using the Place API from Foursquare and unsupervised k-means clustering. Explorary Data Analysis (EDA) will help to discover interesting observations in the data, visualize how close or far are the fitness centers each other.

# Data

For this project the following data sources will be considered but not limited to.

Foursquare API:

Link: <https://developer.foursquare.com/docs>

Foursquare API, a location data provider, will be used to make RESTful API calls to retrieve data about venues in different neighborhoods. This is the link to Foursquare Venue Category Hierarchy. Venues retrieved from all the neighborhoods are categorized broadly into ‘Arts & Entertainment’, ‘College & University’, ‘Event’, ‘Food’, ‘Nightlife Spot’, ‘Outdoors & Recreation’, etc. An extract of an API call is as follows:

