

**Coursera Applied Data Science Capstone**  
**The battle of neighborhoods (week 1)**

**Subject: Find a suitable location to establish a burger restaurant in Athens metropolitan area, Greece**

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## **1. Introduction**

**The concept:**

Athens metropolitan area is famous for the variety of food and it is an expandable industry.

**The objective:**

In this project, our objective is to find the most suitable locations for investing in order to establish a new burger restaurant.

**The selecting criteria:**

We have to define the specifications for a location to be suitable:

- Be close to a metro railway station, in order to be easily accessible by the mass since Athens has a huge problem concerning the car parking
- Total number of similar restaurants with a radius of 1,000 meters around each metro station
- The nearest burger restaurant to the metro line station should also have some impact on the results

**Tools that should be used:**

We'll use the following tools:

- Watson studio Jupyter notebook with Python 3
- Foursquare developer API
- Install python libraries (conda and geopy)
- Import python libraries:
  - Pandas, for dataset modification
  - Numpy for handling numerical operations
  - Matplotlib, for generating meaningful charts
  - Folium, for map visualizations
- K-means machine learning unsupervised learning algorithm