

# The Battle of Neighborhoods – Osaka

## (Week 1)

### 1. Problem description

Osaka is well-known as the kitchen of Japan, which says a lot, given the internationally highly praised food culture of Japan. Moreover, with its increasing popularity as a tourist destination, it may be of interest to have an overview of the city's neighborhoods for hungry tourists looking for a good spot to replenish their energy throughout the day, or enjoy a nice dinner after an active day of exploring.

**Thus, we formulate our business problem as follows:** can we provide a segmentation of Osaka's neighborhoods in terms of restaurants that is useful for tourists visiting the city, given the difficulty of choice due to the large number of possibilities to choose from?

In an attempt to solve this problem, we will leverage Foursquare location data on restaurants in Osaka, while referring to the different neighborhoods of the city so as to provide useful information regardless of which part of the city a hungry tourist may find themselves in.

### 2. Data

We shall require the following data in order to solve the above problem:

- **Neighborhoods & coordinates:** Similarly to previous labs, we will scrape the Wikipedia page on the [list of Osaka's wards](#), after which we will obtain the coordinates of the wards using the geocoder class of the Geopy client. This data consists of features such as the name of the ward, its population, its area, and most importantly its coordinates.
- **Restaurants:** we will source the data on restaurants in Osaka's neighborhoods from Foursquare API. This data might consist of features such as venue category, type of restaurant.