Picking a restaurant location in Porto, Portugal

# Introduction

## Background

Porto is the second biggest city in Portugal, situated in the northern part of the country. In the last few years it has become a very popular touristic destination, due to its antiqueness, beautiful landscapes, its proud and friendly people and the fact that it is cheaper than most European big cities, having won multiple Best European Destination awards.

This has caused a huge boom of restaurants, tourism services and housing prices, presenting good business opportunities but also riskier investments as rent is very high, and competition is fierce.

I have chosen Porto because it’s a city I’m familiar with, having lived there for 5 years, so I have some knowledge to perform assumptions when/if key data of some part of the problem is missing. It could also mean that this assignment will have some practical usefulness

## Problem

In this project we will try to find a good location to open a new restaurant in Porto and its adjacent counties. We will make our recommendation based on an expected profit function with some adjustable parameters so we can iterate between optimistic and pessimistic predictions.

Initially, we will not recommend any specific type of restaurant. If enough time is available we will later recommend a type and price range as well.

# Data

## Datasets used

The following datasets will be used to perform this analysis:

* Foursquare API to retrieve venues in the area;
* Population density per County table;
* Price per m2 of new lease agreements by Parish table;
* Purchase power index by County table;

All of these tables are public and available at <http://www.ine.pt>; This is the National Institute of Statistics of Portugal webpage which aggregates all kinds of official data for the country, so it should be the most reliable source for our analysis.

This section will have more detail once we start working on Week 2 of the assignment.