Where to open your new restaurant in Sasebo

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A. Introduction

If you are planning to open your new restaurant, you may be interested in where you should open it. We must consider a lot of factors such as house prices, the neighborhoods' salary, the cost of materials, water, light, and gas, etc. In this paper, I focus on the population of the town and trend.

A.1 Background

These days, a lot of restaurant is having difficulty in running because of COVID-19. We are restricted to go out and We must do everything nearby my home. On the contrary, supermarket is very crowded because everybody stays home and must purchase foodstuffs at it. In this situation, I got thought that if a restaurant which deals with dishes to go or only dishes to go, like BENTO is in residential area, it is not influenced by the unpredictable accidents. Based on this assumption, I want to pic up the place that must be suitable for the restaurant.

A.2 Problem

I set the problem that one of my friends told that 'Please tell me where should open my new restaurant? Search the population of each town and tell where is looks good.' So, I must search the population and restaurants in each town.

B. Data

B.1 Sasebo

I chose the town: Sasebo, Nagasaki Pref. Japan, because it is my hometown. Sasebo has a lot of spot that is worthy of an eat and visit. Sasebo hamburger contains egg, bacon, tomato, lettuce, beef, spice and so on. It has affected by U.S. Military base. Sasebo has '99 islands' and we can see a beautiful sunset. One tip is that the number of '99 island' is not and 99 but 208. If you interested in Sasebo, please visit, and enjoy sightseeing.

B.2 Data URL

The Latitude and Longitude of town data(1st data) is here. To download it, you have to agree

with the rule. Population data(2nd data) is here, and polygon data(3rd data) is here. These sites are written in Japanese language and it may be hard to understand it. However, if you click download link or 'ダウンロード' button, you can download them.

B.3 Data Structure

1st data is csv file and 6th to 8th column is the name of neighborhoods, Latitude, Longitude.

2nd data is xlsx file and columns mean from right: KEY_CODE, population of neighborhoods, name of neighborhoods, population of man, population of woman, the number of households.

3rd data is geojson file and contains polygon data.

B.4 Data Preprocess

3rd data does not need preprocessing. I changed column name of 1st and 2nd data. I used 1st data of ['緯度', '経度', '大字町丁目名', '大字町丁目コード'] and rename them into {'緯度':'Latitude', '経度':'Longitude', '大字町丁目名':'Neighborhood', '大字町丁目コード':'code'}. I converted column name of 2nd data into ['KEY_CODE', 'population', 'Neighborhood', 'man', 'woman', 'households'].