

# **Best Place to Open a new Ice cream shop in Salvador**

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## **1. Introduction**

### **1.1 Background**

Salvador is the fourth biggest city in Brazil, with 2.9 million people and about 692,818 km<sup>2</sup>.

Salvador is also a very popular tourist destination, due mainly to its history, culture and weather. Every year, especially during the Summer, over 1 million tourists come to spend some time in the city.

Salvador has 50 km of beaches. Due to the warm weather, the beaches are one of the top leisure activities for both: locals and tourists.

### **1.2 Problem**

I have a friend willing to open a new Ice cream shop and I would like to recommend her a good place for it.

However, this research can be used by any businessmen willing to open a new Ice cream shop in the city.

### **1.3 Interest**

The audience would be businessmen interested in exploit new opportunities at the city.

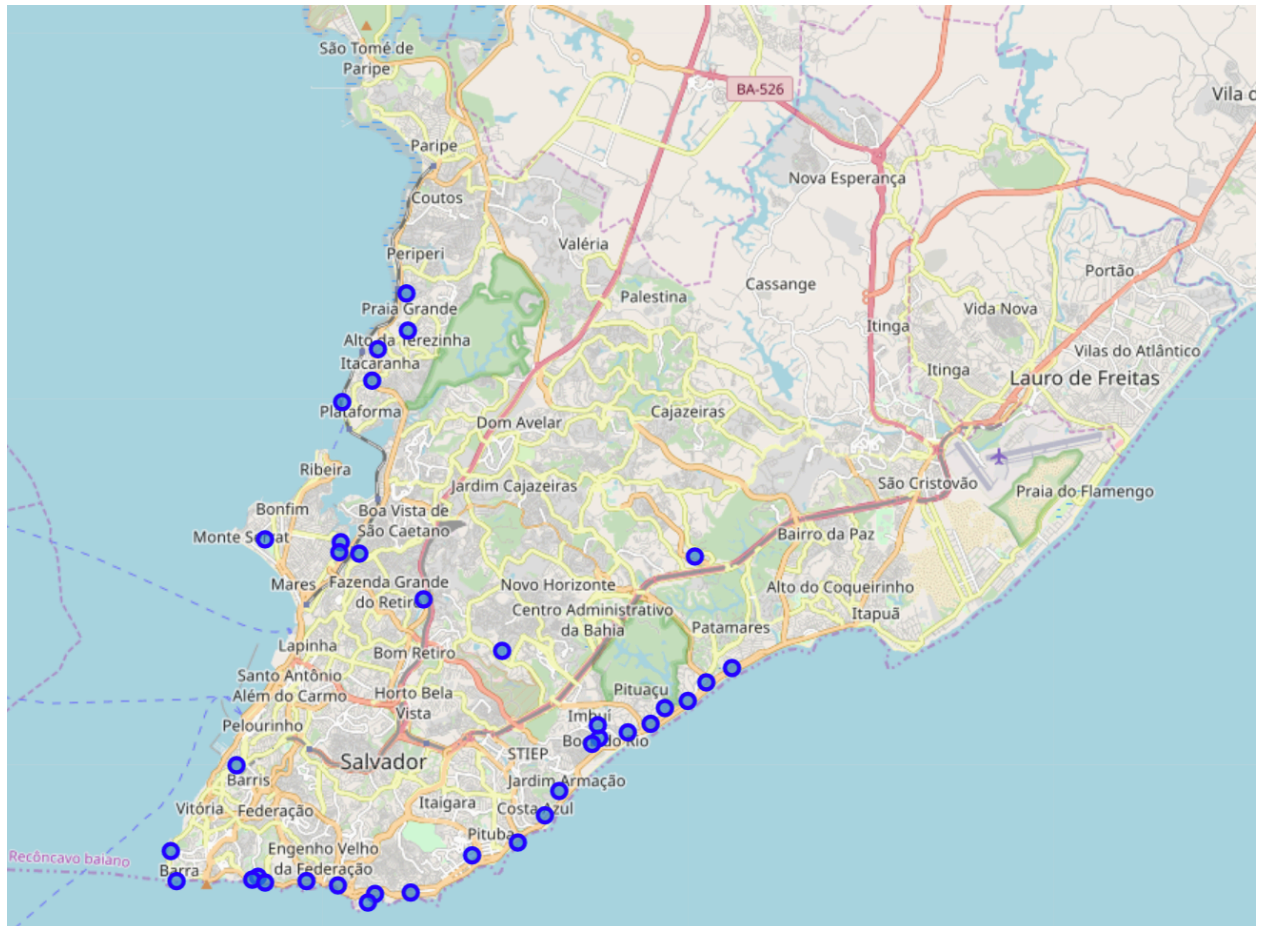
## **2. Data**

### **2.1 Data sources**

We assume that ice cream consumption will be higher close to the beaches.

We've used Foursquare to identify both: the main beaches in the city as well as the existing ice creams close to them.

This is the map of recognized beaches Salvador, provided by Foursquare:



## 2.2 Data Cleaning

The json provided by Foursquare returned some venues that were not really beaches, but, instead were harbor or even restaurants. We've cleaned the data in order to remove the invalid spots.

## 3. Methodology

The data frame containing the beaches of the city had 89 rows and the following features: id, name, categories, lat and lng.

Id: the venue id

Name: the name of the Beach

Categories: Beach

Lat: latitude of the venue

Lng: longitude of the venue

Here are the first 15 elements in the dataframe:

	id	name	categories	lat	lng
0	4bce20f1ef109521f18c8386	Praia do Porto da Barra	Beach	-13.003226	-38.532317
2	4f50b31de4b0a3428a690578	Praia da Paciência	Beach	-13.010340	-38.499790
3	4cc4668ef49676b0188e72d5	Praia do Buracão	Beach	-13.013216	-38.483506
4	520755f893cdb1bf12924f72	Praia da Barra	Beach	-13.010119	-38.531048
5	4d97688597d06ea878331b0b	Praia de Ondina	Beach	-13.009268	-38.511682
6	4efb21a4d5fba46862a67295	Praia de Boa Viagem	Beach	-12.930216	-38.509697
7	4dba3ca66a23e2622d9d2ddd	Praia do Rio Vermelho	Beach	-13.011269	-38.492438
9	507f15b7e4b08ec3d1a29645	Praia da Ribeira	Beach	-12.931015	-38.491591
11	5234947b11d2a87016d720e1	Praia Madre de Deus	Beach	-12.933546	-38.487054
14	4c221fde9390c9b6da01cacd	Praia Jardim de Alah	Beach	-12.994726	-38.442606
15	4d21d53a756e8cfa6c2b7954	Praia de Amaralina	Beach	-13.012939	-38.474799

After identifying the beaches, we've tried to locate ice cream shops close up to 300 meters to the beach.

We've created a list containing the beaches lacking a close ice cream shop.

#### 4. Results

Here are the list of beaches in Salvador without a close ice cream shop:

'Praia da Paciência',  
 'Praia de Ondina',  
 'Praia Madre de Deus',  
 'Praia Jardim de Alah',  
 'Praia de Amaralina',  
 'Praia de Armação',  
 'Praia da Pituba',  
 'Praia de Mar Grande',  
 'Praia de Patamares',  
 'Praia dos Buzios',  
 'Praia Da Armacao',  
 'Praia de Piatã',  
 'Praia de Pituaçu',  
 'Praia De Periperi',  
 'Praia de Itacaranha',  
 'Praia de Piatã',

'Praia Grande',  
'Praia da 3ª Ponte',  
'Praia Farol da Barra',  
'Praia de Placafor',  
'Praia do Alvejado',  
'Praia Do Jaburu',  
'Praia do Bom Despacho',  
'Praia do Flamengo - Salvador',  
'Praia da Penha'

## **5. Conclusion**

In this study, I've analyzed the beaches in Salvador lacking close ice creams. First, I created a dataframe containing the beaches of Salvador and their respective latitude and longitude. Then, for each beach, I located ice cream shops close to it up to 300 meters. Finally, I created a list of beaches lacking a close ice cream shop. This is a valuable information for entrepreneurs willing to open a new ice cream shop in the city.