

# Improving the quality of life and development in a large city

## 1.INTRODUCTION

### 1.1.Problem

São Paulo is the most populous city in the american continent and the richest city in Brazil, but suffers from the inequality of development between the central region and the periphery.

The economic and social development of the peripheries can improve the lives of all, including the inhabitants of the central region.



São Paulo is the capital of the state of São Paulo (r.1)



São Paulo is a state of Brazil (r.1)

### 1.1.Audience

This report is intended for those responsible for urban development in the city of São Paulo

### 1.2. Purpose

The city of São Paulo is divided into districts (or neighborhoods). Let's compare the central and peripheral districts with regard to nearby venues, the human development index, average monthly salaries and population. Which districts deserve greater attention from the authorities?

## 2.DATA DESCRIPTION

To compare São Paulo's central region and peripheral region, we will study where the largest populations, the best salaries, the stores and the services are concentrated.

Let us scrap some Wikipedia pages “List of districts of São Paulo by population”(r2)

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[1]:
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	Position	District	Population2010	Population2000
0	1	Grajaú	444593	333436
1	2	Sapopemba	296042	282239
2	3	Jardim Ângela	291798	245805
3	4	Brasilândia	280069	247328
4	5	Capão Redondo	275230	240793

And scrap “List of districts of São Paulo by Human Development Index” (r3)

	District	Human Development Index	Classification
0	Moema	0.981	very high
1	Pinheiros	0.980	very high
2	Perdizes	0.977	very high
3	Jardim Paulista	0.975	very high
4	Alto de Pinheiros	0.972	very high

“Human Development Index (HDI) was created to emphasize that people and their capabilities should be the ultimate criteria for assessing the development of a country, not economic growth alone. The HDI can also be used to question national policy choices” (r4). And it is based on long and healthy life, knowledge and descent standard of living.

Let us merge these dataframes and look for districts' coordinates in Google Maps (r5):

[ 4 ] :

Unnamed: 0	Position	District	Population2010	Population2000	Human Development Index	Classification	Latitude	Longitude	
0	0	1	Grajaú	444593	333436	0.754	medium	-23.771911	-46.669070
1	1	2	Sapopemba	296042	282239	0.786	medium	-23.573739	-46.524185
2	2	3	Jardim Ângela	291798	245805	0.750	medium	-23.700988	-46.769102
3	3	4	Brasilândia	280069	247328	0.769	medium	-23.470400	-46.689832
4	4	5	Capão Redondo	275230	240793	0.782	medium	-23.668870	-46.769991

We will explore districts venues with Foursquare API (r6):

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[16]:
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	District	District Latitude	District Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
0	Sapopemba	-23.573739	-46.524185	Pizzaria Família K	-23.571293	-46.524938	Pizza Place
1	Sapopemba	-23.573739	-46.524185	Nova Colonial Pizzaria e Choperia	-23.569667	-46.524516	Pizza Place
2	Sapopemba	-23.573739	-46.524185	Padaria Monsenhor	-23.571328	-46.527176	Bakery
3	Sapopemba	-23.573739	-46.524185	Subway	-23.571205	-46.523084	Sandwich Place
4	Sapopemba	-23.573739	-46.524185	Hortifrut Jd. Vila Formosa	-23.571360	-46.525167	Grocery Store

Let us scrap wages by district (r7), convert the values to dollars and merge to other dataframes:

[27]:

Unnamed: 0	Position	District	Population2010	Population2000	Human Development Index	Classification	Latitude	Longitude	Average Monthly Wage R\$	Average Monthly Wage US	
0	0	1	Grajaú	444593	333436	0.754	medium	-23.771911	-46.669070	1852.28	561.296970
1	1	2	Sapopemba	296042	282239	0.786	medium	-23.573739	-46.524185	2500.50	757.727273
2	2	3	Jardim Ângela	291798	245805	0.750	medium	-23.700988	-46.769102	1889.36	572.533333
3	3	4	Brasilândia	280069	247328	0.769	medium	-23.470400	-46.689832	1680.36	509.200000
4	4	5	Capão Redondo	275230	240793	0.782	medium	-23.668870	-46.769991	2018.27	611.596970

### 3. REFERENCES

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