

# Battle of Neighborhoods of -Port Elizabeth & Durban in South Africa

## Capstone Project

### 1. Introduction / Business Problem

- When thinking about relocating to a new city or country for work purposes or to start a new life, or to go for a holiday destination people tend to research areas before moving. This research includes population rate, average house price, school ratings, crime rates, weather conditions, recreational facilities, holiday destinations-tourism, Carnivals and Sports events/activity. etc.
- Based on the above, a search engine algorithm would be an efficient tool to use that will allow users to enter cities and get the neighborhood name that best suits their lifestyle or living conditions.
- In this project, we will study in detail the area classification using foursquare data and machine learning segmentation and clustering. And segment areas of two cities based on the most common places captured from Foursquare.
- This could be done as the **aim** of this Project using an algorithm (*Using segmentation and clustering*) that will perform an extensive analysis on
  1. The similarities and dissimilarities between neighborhoods in the two cities of the user's search criteria, and
  2. Determine which neighborhoods best suits their lifestyle.

For this project, I will be developing a recommendation system using the **Port Elizabeth** and **Durban** cities in South Africa as my search criteria:

#### **\*\* Brief Information About: Port Elizabeth and Durban \*\***

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- **Port Elizabeth** and **Durban** are two major cities **in South Africa** Both the cities become a center of attention for residential, holiday destinations-tourism, education, job employment, shopping and sports activity. Both cities are well known in South Africa and become the top choice for local and foreign communities. Also for the best holiday destinations in the world because of its Mediterranean climate, vibrant nightlife, Michelin Star restaurants, scenic coastal drives, staggering mountain landscape and friendly people; the latter holds the top spot as a family-friendly destination and for its wonderful beaches and water activities.

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## Port Elizabeth

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**Port Elizabeth** or **The Bay**<sup>[2]</sup> (Xhosa: iBhayi; Afrikaans: Die Baai [di 'ba:i]) is one of the major cities in South Africa; it is situated in the Eastern Cape Province, 770 km (478 mi) east of Cape Town. The city, often shortened to PE and nicknamed "The Windy City", stretches for 16 km along Algoa Bay, and is one of the major seaports in South Africa. Port Elizabeth is the southernmost large city on the African continent, just farther south than Cape Town. Port Elizabeth was founded as a town in 1820 to house British settlers as a way of strengthening the border region between the Cape Colony and the Xhosa. It now forms part of the Nelson Mandela Bay Metropolitan Municipality, which has a population of over 1.3 million.

(Source - [https://en.wikipedia.org/wiki/Port\\_Elizabeth](https://en.wikipedia.org/wiki/Port_Elizabeth) )

## Durban

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Durban (Zulu: eThekweni, from itheku meaning "bay/lagoon") is the third most populous city in South Africa—after Johannesburg and Cape Town—and the largest city in the South African province of KwaZulu-Natal. Located on the east coast of South Africa, Durban is famous for being the busiest port in the country. It is also seen as one of the major Centres of tourism because of the city's warm subtropical climate and extensive beaches. Durban forms part of the eThekweni Metropolitan Municipality, which includes neighboring towns and has a population of about 3.44 million,[7] making the combined municipality one of the biggest cities on the Indian Ocean coast of the African continent. It is also the second most important manufacturing hub in South Africa after Johannesburg. In 2015, Durban was recognized as one of the New7Wonders Cities (along with Vigan, Doha, La Paz, Havana, Beirut, and Kuala Lumpur).

(Source - <https://en.wikipedia.org/wiki/Durban> )

### **\*\*Target Audience\*\***

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Through this project we are expecting following people to benefit out of the findings.

1. People migrating city for work.
2. Business person looking for new location to start office etc.
3. Tourist.
4. Restaurants to finalized menu based on the type or people, their likings based on feedbacks etc.
5. Sports Events, Activities Organizers and many more.