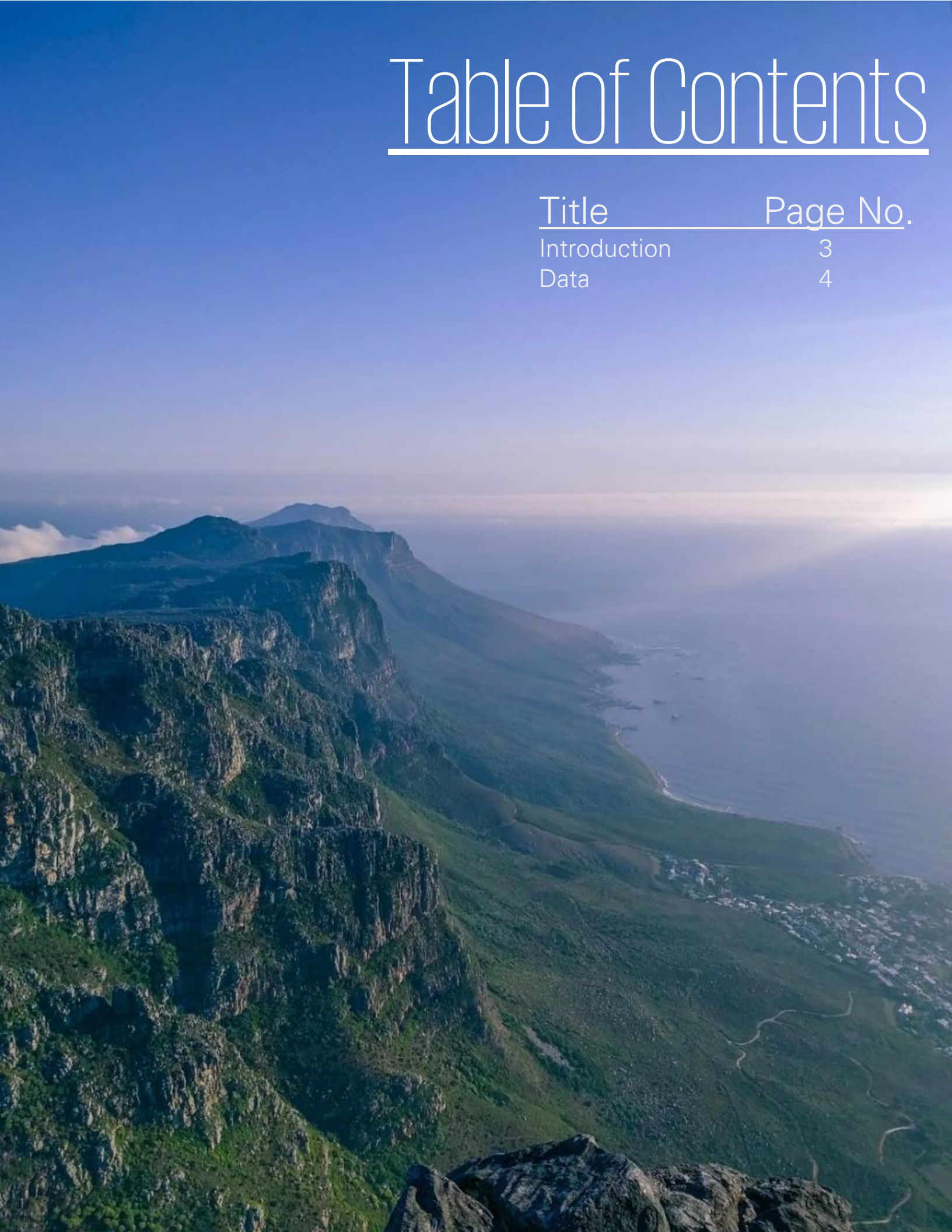
BATTLE OF THE NEIGHBORHOODS

Table of Contents



Introduction

When thinking about relocating to a new city or country for work purposes or to start a new life, people tend to research areas before moving. This research includes population rate, average house price, school ratings, crime rates, weather conditions, recreational facilities 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. This could be done using an algorithm that will perform an extensive analysis on the similarities and dissimilarities between neighborhoods in the two cities of the user's search criteria, and determine which neighborhoods best suits their lifestyle.

For this project, I will be developing a recommendation system using the following cities in South Africa as my search criteria:

VS

Data

The data used for this project will be acquired from http://www.sapostalcodes.info/. The datasets consists of the postal codes and suburb names of each city. In addition, the Foursquare API search feature will be used to collect neighborhood venue information as well as the longitude and latitude details of each suburb.

Details about local venues and locality will provide insight into the qualities of a neighborhood. In addition to Foursquare, various python packages will be used to create maps and machine learning models to gather further insights and provide efficient recommendations and results. This packages include:

- ✓ Pandas - Library for Data Analysis
- ✓ NumPy – Library to handle data in a vectorized manner
- ✓ JSON – Library to handle JSON files
- ✓ Geopy – To retrieve Location Data
- ✓ Requests – Library to handle http requests
- ✓ Matplotlib – Python Plotting Module
- ✓ Sklearn – Python machine learning Library
- ✓ Folium – Map rendering Library