Report

Purpose

The purpose of this research is:

- To find the optimal/best potential location for new Hospital inside Kathmandu valley
- To work in proven methodology to establish top list of potential sites for a new hospital
- In Kathmandu Valley and identify a shortlist of sites
- To evaluate the alternative for the best location.

Introduction

Selecting a location for a potential hospital often decides the success or the failure of such a facility. It is thus important to assess the locations from multiple dimensions before selecting the site. This document focuses on the multi factor evaluation of hospital sites using **Data Driven Analysis process (DDAP)** and evaluates three potential sites inside Kathmandu valley. This document is considered three major factors and eleven sub factors in the evaluation. Findings show that among the sub factors, cost of land, population density and proximity to public transport evolved as the three most significant sub factors.

While opening a Hospital can be a very lucrative business, a lack of demand causes many hospitals to close overtime. There are many different factors that can account for a Hospital's success such as location, competition, patient experiences, Doctor's rating and specialities, etc. These are some important questions that every investor must carefully answer before deciding whether to open a hospital or not.

Besides there are many other factors such as environmental, clinical, potential to grow, legal and regulatory etc.

To demonstrate the process of picking a location for a client opening a business, the project will focus on answering the following question: "If the client wanted to open a world class hospital inside Kathmandu Valley, what areas are the best options to open the Hospital?"

We will follow the data driven approach and perform various analytics on those data to answer the following questions.

1. General
2. Location wise babal thau ma xa?
    a. Does the highway network, locally and strategically, have the capacity to access and serve the hospital?
    b. Kathmandu ko sabai point bata xito pugna sakinxa
    c. Existing Highway networks to connect to outside of KTM
    d. Traffic Congestion ko ni issue khasai xaina
    e. Public Transportation ko availability and
    f. Availability of developable land

Data

To answer this business problem, the following factors have to be extracted from various data sources:

- Population & Ethnic Distribution of Each Neighborhood (Nepal Census)
- Income Distribution of Each Neighborhood (Nepal Census)
- Number of Hospitals in Each Neighborhood (Google Map API)
- Air Quality Index (data from https://pollution.gov.np/) and Local Research

The Nepal Census data was extracted from Census of Nepal

Besides, we have collected the following data manually.

1. Major hospitals inside Kathmandu Valley and various data related to them
    a. Name
    b. Location
        i. Direction
        ii. Distance from Major Location
    c. Key Highlights of the hospital
    d. Owner and Owner Background
    e. Website URL

Data Processing and Compilation

All the data has been fed to our proprietary Research software (developed by Ombryo Pte Ltd. Singapore) The software uses GPT-3 Algorithm from Open AI to extract useful information from the data and predict the best optimised location for the hospital. We have open sourced the entire dataset on the github (https://github.com/ombryo/sdasda)

Major Criteria and Criteria Weight

This is decided by Investors and key stakeholders themselves

Conclusion

Based on the extensive research and the preferences, the location that will be the ideal for building a new Hospital, is **Lokanthali Chowk (23N, 87E)**.

For this conclusion we have taken into consideration following factors:

The suggested location is

i. sufficiently far away from major hospitals

Suggestion Location Summary

Location: Lokanthali Chowk (23N, 87E) .

Features:

This location satisfies the following criteria: