**The Battle of Neighborhoods | Business Proposal | Introduction**

**Introduction:**

The goal of this project is to help families with children find the best neighbourhoods in Moscow to live in. It will help people make an intelligent and effective decision about choosing a great neighbourhood from the many other neighbourhoods in Moscow.

This project is for those people who are looking for the best neighbourhoods. For easy access to schools, hospitals for adults and children, dental clinics and swimming pools.

The aim of this project is a comparative analysis between neighbourhoods in Moscow. Characteristics include accessibility of social facilities, and their number.

This will help people get information about the area and its surroundings before moving to a new district of the city.

**Problem Which Tried to Solve:**

The main goal of this project is to offer the best neighbourhood in the city of Moscow for families with children. Connections to schools, hospitals and leisure centres and other everyday needs nearby.

**The Location:**

Moscow (Russian: Москва) is the capital and largest city of Russia. The city stands on the Moskva River in Central Russia, with a population estimated at 12.4 million residents within the city limits, over 17 million residents in the urban area, and over 20 million residents in the metropolitan area. The city covers an area of 2,511 square kilometres (970 sq mi), while the urban area covers 5,891 square kilometres (2,275 sq mi), and the metropolitan area covers over 26,000 square kilometres (10,000 sq mi). Moscow is among the world's largest cities, being the largest city entirely in Europe, the largest urban area in Europe, the largest metropolitan area in Europe, and the largest city by land area on the European continent.

**Yandex Geocoder API:**

The Yandex.Maps service provides access to the Geocoder HTTP API. This API allows you to determine the coordinates of a toponym from its address, or the address of a point from its coordinates.

**Clustering Approach:**

To select the best area, we decided to do clustering of objects based on their geographical coordinates. Two clustering algorithms were used, k-means and SOM.

**Libraries Which are Used to Develope the Project:**

Pandas: For creating and manipulating dataframes.

Folium: Python visualization library would be used to visualize the neighborhoods cluster distribution of using interactive leaflet map.

Scikit Learn: For importing k-means clustering.

JSON: Library to handle JSON files.

XML: To separate data from presentation and XML stores data in plain text format.

Geocoder: To retrieve Location Data.

Requests: Library to handle http requests.

Matplotlib: Python Plotting Module.