**Introduction**

1. Background

As an Estate agency we are helping people to find their new home. We gather requirements from our clients and propose top 5 solutions. We are mostly focused on a proper location since the traffic problem limits possibilities for comfortable movement on a car.

1. Problem

Our client is a family with one child. They want to find an apartment close to their offices (Pawia 7 street and Puszkarska 7 street). Nearby the apartment (<1 km) there should be a school, park and a stadium since the kid plays football.

1. Interest

Such analysis should help to gain the whole picture of possible places to live for the family. Optimal distances help:

* to save time on day-by-day travels,
* to save money on gas and
* to have an opportunity to spend more time together.

**Data**

1. Data sources

List of Postal codes per the street is extracted from here:

<http://krakow.naszemiasto.pl/artykul/krakow-kody-pocztowe-jakie-sa-kody-pocztowe-ulic-w-krakowie,3241785,artgal,t,id,tm.html>

The list of geospatial coordinates will be created based on Postal Codes with Foursquare API.

1. Data cleaning

Use beautiful soup to request the table from the webpage. Clean the data from html syntax and create a dataframe: Postcode, Street, Longitude, Latitude.

1. Feature selection

**Methodology**

**Results**

**Discussion**

**Conclusion**

Who we are: Estate agency

Our client: Family with at least one child wants to find a perfect home in the city. Parents work in the office and kid goes to school.

Our task: Find the best neighborhood for the middle class.

I will consider next parameters as essential:

• Offices (2 points on a map + 5 km radius)

• Schools (less than 1km from home)

• Park (less than 1km from home)

• Stadium (less than 1km from home)

Based on these parameters we will be able to find a home for the family with a school, stadium and a park nearby.

Where we are: Cracow area

Final product:

Sorted list of suitable streets

Feature example: distances from Offices-Home, School-Home, Park-Home, Stadium-Home, etc.