SIMILAR NEIGHBORHOODS IN NEW YORK AND TORONTO

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PROBLEM:

In recent years there has been many immigrants from New York to Toronto and vice versa. On the other hand, moving to a new city is not an easy task to do, specially if one is already satisfied with her neighborhood and is reluctant to leave it. But due to emerging Machine Learning techniques and rich location APIs (such as the one provided by Foursquare), possible solutions are found. In this mini-project, different neighborhoods of New York and Toronto are compared and similar neighborhoods between the two states are found. In this way if one is moving to another city, she can find the most similar neighborhood to her current one and simply relocate there.

DATA:

The data used in this mini-project consists of two dataframes for each city. Each one has the name, latitude and longitude of a single neighborhood. We then use Foursquare API to retrieve top popular venues in each neighborhood. Then the category of each neighborhood is assigned and all venues of a neighborhood are one-hot encoded based on their category. Then the two dataframes are joined together. Finally, a clustering model is applied on the data and neighborhoods in the same cluster will be the most similar ones to each other.