**Recommended restaurant in N.Y**

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# Introduction

My client who operates some restaurants in New York often mailed to customers who ever visited there in order to drive sales. But his sales volume has not increased more than he expected.

Now he thinks that any strategy is needed to invite new customer. So, I propose finding prospective new customer on Forsqare users and advertise them by any means.

# Data

Forsquare provides venues and users who liked or listed it, so that we can assume what kind of people is interested in what kind of venue in a certain extent. These data can be utilized to recommend venues which he has not yet visited.

(Unfortunately, venues which has been visited by users actually are not requested by other than themselves.)

## Categories of restaurants

On Forsqure, there are many kind of restaurant categorized, American, Japanese, Chinese,etc. To get venues categorized restaurants afterword, use API and get categories list.

API response is dictionary format, and category records (id, name) are hierarchized.

According to the spec of category data(<https://developer.foursquare.com/docs/build-with-foursquare/categories/>) , 3 categories are enough for food category.

スクリーンショットの画面

自動的に生成された説明

<df\_cat>

## Restaurants in NY

Get venue API is used. Responded venue’ property has only category class, so merge previously created df\_cat.

## Tips and Lists

Get venue’s detail API is used. Assumption is that tips or lists is created because he liked there. So users who posted tips or created lists are corrected in venue’s detail and df\_tips and df\_lists can be created.

*Get Venues Details API is premium call (500 calls per day) so executed daily batch on IBM Watson Studio.*

**Venues on Tips and Lists will be scored 5, and 4.**

## Liked

Using users, which extracted from tips and lists, Venues with flag ‘liked’ them can be called.

*The number of calls are very large. Because API call is limited 500 calls per hour, so*

*so executed hourly batch on IBM Watson Studio.*

**Venues on Tips and Lists will be scored 3.**

## Venues with same category as his existing favored venues

Of all venues, venues with same category or same super-category as ones on his tips, lists, and liked will be also populated.

**Venues on same category and same super-category will be scored 2 and 1.**

Now these data are merged and scored data will be created.

文字と写真のスクリーンショット

自動的に生成された説明