The Battle of Neighborhoods

Introduction

- Sometimes it is quite hard to choose a desired destination to travel.
- We need know how the places are similar to others

Five possible destinations to travel: Tenerife, Santorini, Maldives, Phuket, Honolulu.

Are they similar to each other?

Data acquisition and cleaning

- Get neighborhoods of places

https://www.geonames.org/advanced-search.htm

- Convert latitude and longitude to decimal

Decimal Degrees = degrees + (minutes/60) + (seconds/3600)

- Foursquare API to find venues

https://api.foursquare.com/v2/venues/search?client_id={{client_id}}&client_secret={{client_secret}}&v={{v}}&ll=&intent=browse&radius=10000&limit=100

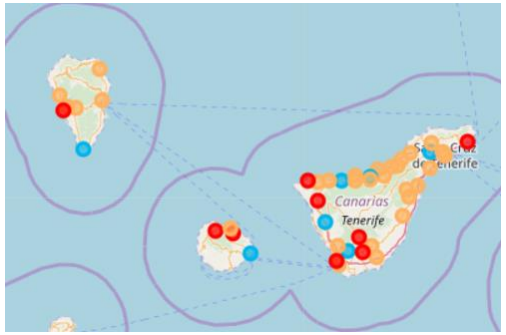
Analayz neighborhood’s data

- Get top 10 commmon venues for each neighborhoods
- Run k-means clustering for neighborhoods
- Run k-means clustering for places

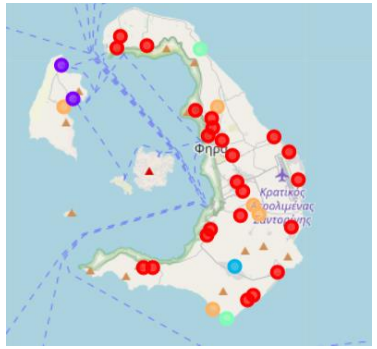
Clustering labels in map

- Map of each places

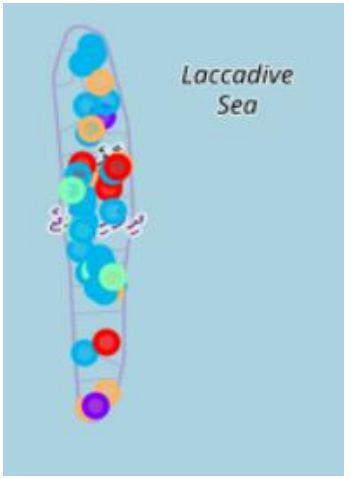
Tenerife

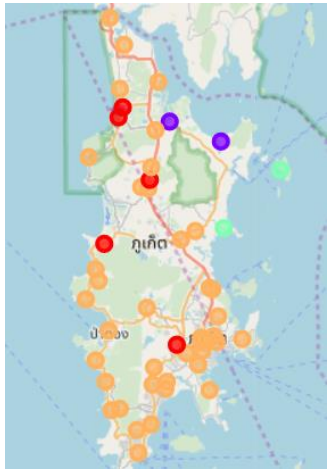


Santorini



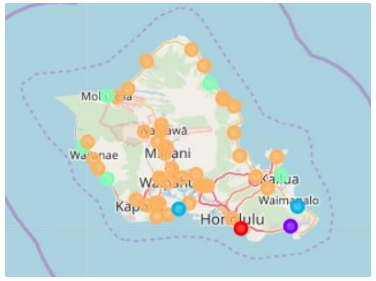
Maldives





Puhket

Honolulu



Clustering of places

- Cluster number = 4

	neighbohood cluster 0	neighbohood cluster 1	neighbohood cluster 2	neighbohood cluster 3	neighbohood cluster 4	label
Tenerife	9	0	7	0	29	3
Santorini	23	2	1	2	5	2
Maldives	5	2	23	5	9	1
Phuket	5	2	0	2	39	0
Honolulu	1	1	2	5	39	0

- Cluster number = 3

	neighbohood cluster 0	neighbohood cluster 1	neighbohood cluster 2	neighbohood cluster 3	neighbohood cluster 4	label
Tenerife	9	0	7	0	29	0
Santorini	23	2	1	2	5	2
Maldives	5	2	23	5	9	1
Phuket	5	2	0	2	39	0
Honolulu	1	1	2	5	39	0

- Cluster number = 2

	neighbohood cluster 0	neighbohood cluster 1	neighbohood cluster 2	neighbohood cluster 3	neighbohood cluster 4	label
Tenerife	9	0	7	0	29	0
Santorini	23	2	1	2	5	1
Maldives	5	2	23	5	9	1
Phuket	5	2	0	2	39	0
Honolulu	1	1	2	5	39	0