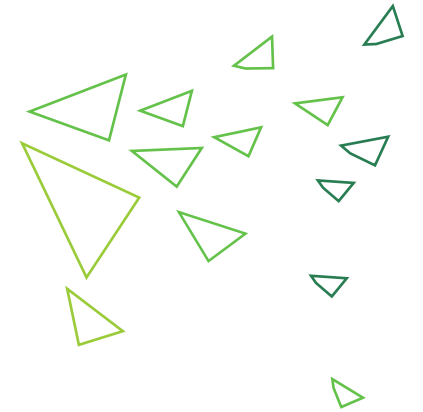
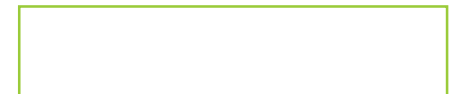


An aerial photograph of a vibrant green rice paddy field in Bali. The field is divided into numerous rectangular plots by narrow earthen paths. A prominent, elongated, and slightly irregularly shaped plot on the right side of the image appears to be a water-filled pond or a recently planted section, showing a darker, more reflective surface. The surrounding area is densely packed with lush green rice plants. In the lower-left corner, there is a thick, dark green cluster of trees and foliage, including several palm trees. A black rectangular text box is positioned on the left side of the image, containing white text. A thin white line originates from the right edge of this text box and points towards the elongated pond-like plot in the upper-right quadrant of the image.

Find the Best Location for Open Restaurant in Bali



BALI is the 3rd Best places to Visit in Asia
BALI is the 5th Best places to Visit in April



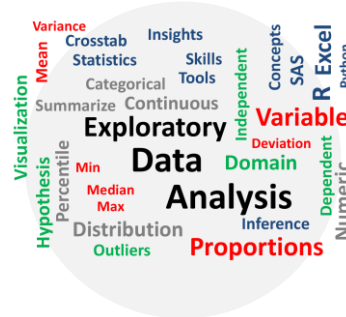
Workflow



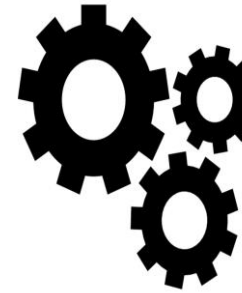
Understanding
Problem



Collecting Data &
Data Cleaning



EDA



Predictive Modeling



Evaluation

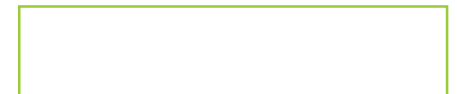
Understanding Problem

Based on definition of our problem, factors that will influence our decision are:

- near recommended restaurant (any type of restaurant)
- easy to access for costumer, that means close to the airport or bus terminal
- close to the regency or city center

Following data sources will be needed to extract/generate the required information:

- number of restaurants and their type and location in every neighborhood will be obtained using Foursquare API
- take district and city name from wikipedia using BeautifulSoup
- coordinate of Bali will be obtained using geopy



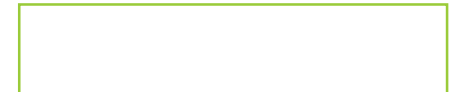
Collecting Data & Data Cleaning

- Collecting Data

1. Using data from Department Statistic Bali (<https://bali.bps.go.id/>)
2. Using API Foursquare (<https://developer.foursquare.com/>)
3. Scrap data from Wikipedia (https://map-bms.wikipedia.org/wiki/Daftar_kabupaten_lan_kota_nang_Bali)

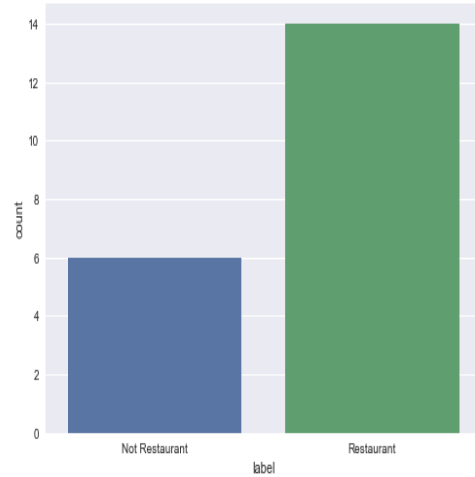
- Cleaning Data

1. Removing unselected places
2. Removing Null Data

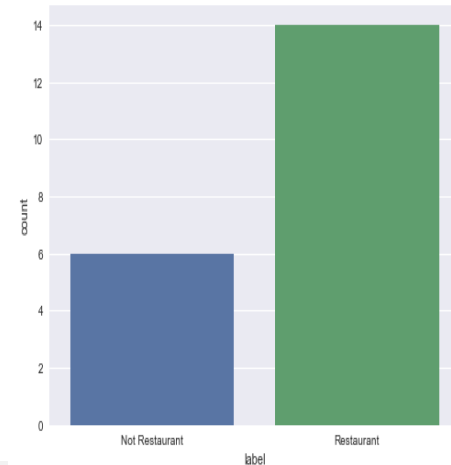


cs Bali
nber Restaurant

cs Bali
nber Restaurant

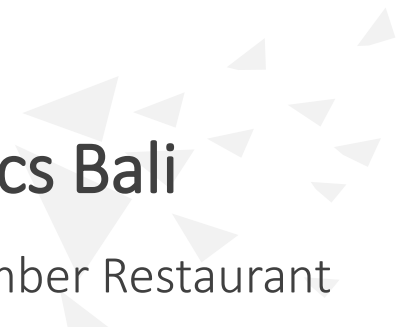


cs Bali
nber Restaurant

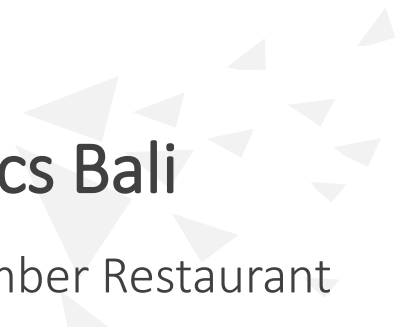


cs Bali
nber Restaurant

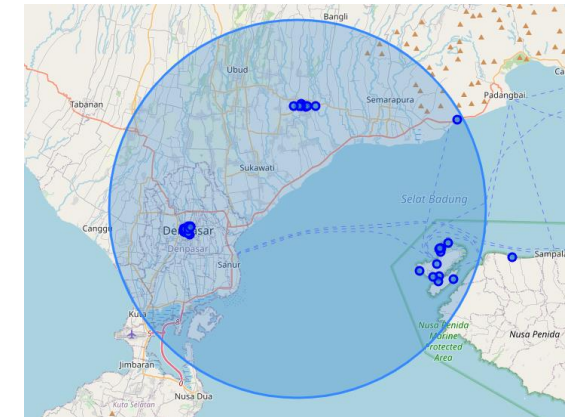
cs Bali
nber Restaurant



cs Bali
nber Restaurant



cs Bali
nber Restaurant



Predictive Modeling

In here we got 3 the best location, namely Denpasar, Badung, Gianyar

We use K-Means for finding centers point where $k=1$

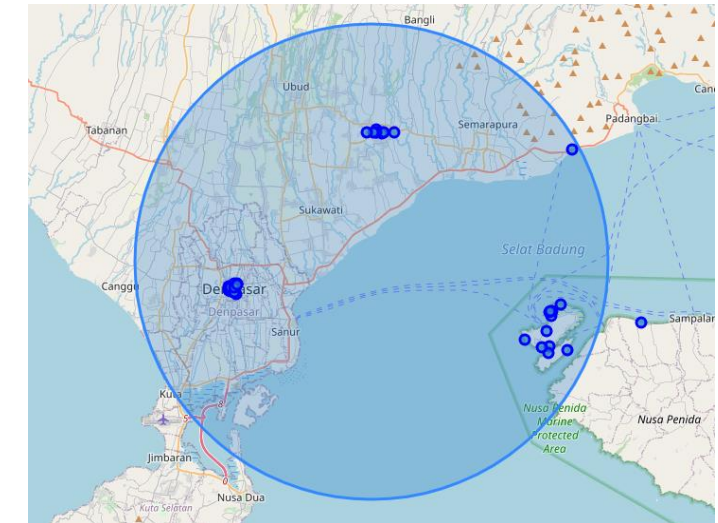
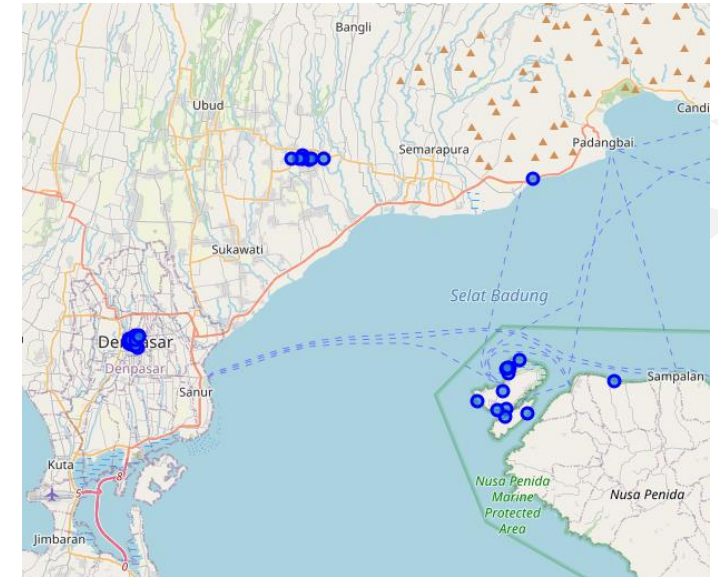
```
kmeans = KMeans(n_clusters=1)
kmeans.fit(recommend_restaurant[['lat', 'lng']])
```

```
KMeans(algorithm='auto', copy_x=True, init='k-means++', max_iter=300,
       n_clusters=1, n_init=10, n_jobs=None, precompute_distances='auto',
       random_state=None, tol=0.0001, verbose=0)
```

```
center = kmeans.cluster_centers_
print(center)
```

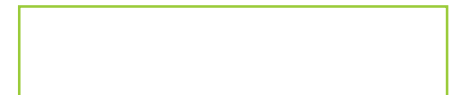
```
[[ -8.63334836 115.31851681]]
```

From 3 best location, we get center latitude -8.63348 and longitude 115.31851



Evaluation

Now, after analyzing data from foursquare, department statistics bali and wikipedia, we can conclusion that the best location for open restaurant in denpasar, gianyar, or badung. in denpasar you can open Indonesian restaurant in there, denpasar is the best place that if you focusing costumer who want to going to airport or harbor. after that for badung is very strategy place for open restaurant but it will dificult if you didn't have much marketing strategy. and the last is gianyar. if you want to safe play you can try that because cooperating with service providers there.



An aerial photograph of a coastal area. On the left, there is a parking lot with several cars and a few small buildings. A path leads from the parking lot towards a sandy beach. The beach is bordered by a line of trees and shrubs. To the right of the beach, there is a large pile of rocks and a rocky shoreline. The water is a clear, light blue-green color. A dark, semi-transparent rectangular box is overlaid in the center of the image, containing the text "Thank You" in white. A thin vertical green line is positioned to the right of the text.

Thank You

Disclaimer

Resource image

source :

<https://www.flaticon.com/authors/freepik>

<http://www.scottkpowers.com/2012/04/understanding-world-hunger-and-other.html>

<https://medium.com/@srivathsagottipati/exploratory-data-analysis-eda-4b81d84ef5cf>

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<https://www.thejakartapost.com/travel/2019/03/30/ten-annual-events-tourists-can-look-forward-to-in-bali.html>

<https://thenounproject.com/term/evaluation/1132369/>