

IBM APPLIED DATA  
SCIENCE CAPSTONE  
FINAL PROJECT:

RESEARCH INTO  
OPENING A NEW  
VIETNAMESE  
RESTAURANT IN  
KUALA LUMPUR CITY,  
MALAYSIA

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## PRESENTATION AGENDA

- Introduction
- Business Problem Statement
- Business objectives and target audience
- Data requirements, source, tools and processing techniques
- Methodology
- Results
- Discussion
- Recommendations
- Conclusion

# INTRODUCTION



- Noodles is a popular staple food for Asian and European, its origin can be traced way back in ancient history.
- Coffee is also a favorite beverage that has reached far corners of the globe and remains a favorite beverage across the globe.
- The focus of this presentation is related to opening a restaurant that serves Vietnamese food, particularly Vietnamese noodles and coffee, which is tasty and unique by its own.



## BUSINESS PROBLEM STATEMENT

- Strategic location of opening a food business is important as it is one of the factor that can influence the success of the food business venture.
- There is requirements to understand the best location to open a Vietnamese Restaurant in Kuala Lumpur City using business intelligence and insight.

## BUSINESS OBJECTIVE AND TARGET AUDIENCE

- The objective of this market intelligence report is to provide information on the existing Vietnamese restaurant in Kuala Lumpur city area, highlighting which area that has a high concentration of Vietnamese restaurant as well as identifying which area that is underserve and offer business opportunity and potential..
- The target audience of this report is limited to the board of directors and senior management of the client who commissions this report.



## DATA REQUIREMENTS

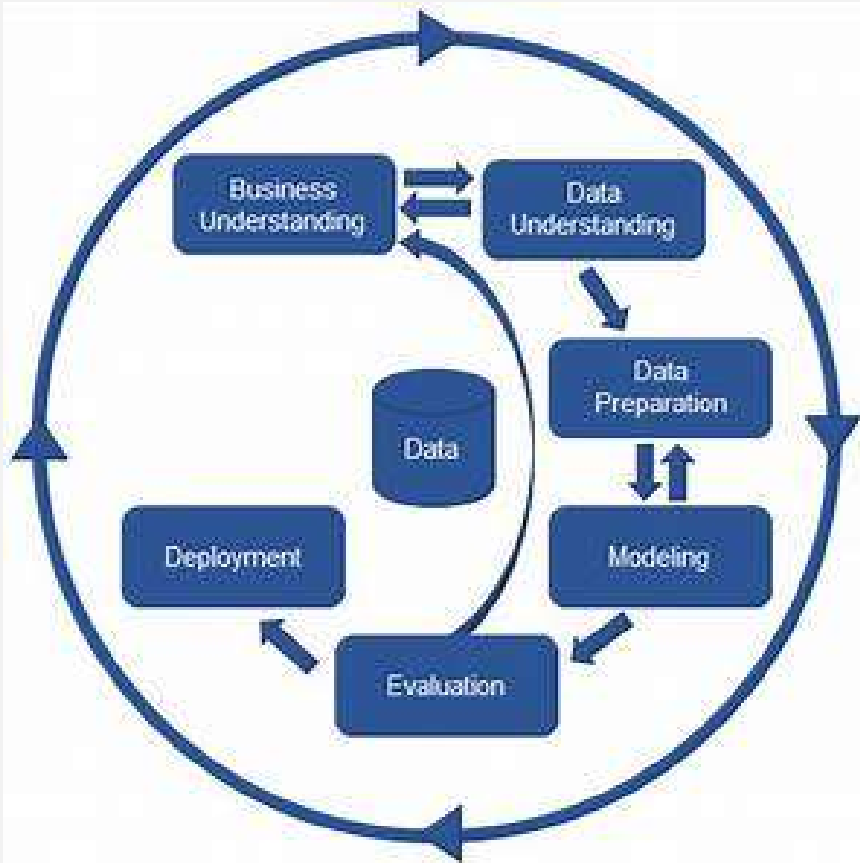
- The Kuala Lumpur, Malaysia geo-position (Latitude, Longitude).
- The Vietnamese restaurant location data (latitude and longitude) to enable the creation of the visual map and insight knowledge about the existing concentration of Vietnamese restaurant and which cluster offer the strategic opportunity for the venture.

## DATA SOURCE, TOOLS & PROCESSING TECHNIQUES

- Geocoder to find the coordinates of Kuala Lumpur, Malaysia and the use of Four-Square API to retrieve the Vietnamese restaurant venue information within 20km radius from the geo-position of Kuala Lumpur, Malaysia.
- Python Pandas and Numpy for data wrangling and analysis
- Python Geocoder library package to retrieve the latitude and longitude information for Kuala Lumpur township and Four-square API calls for venue information.
- Python Folium for map visualisation.



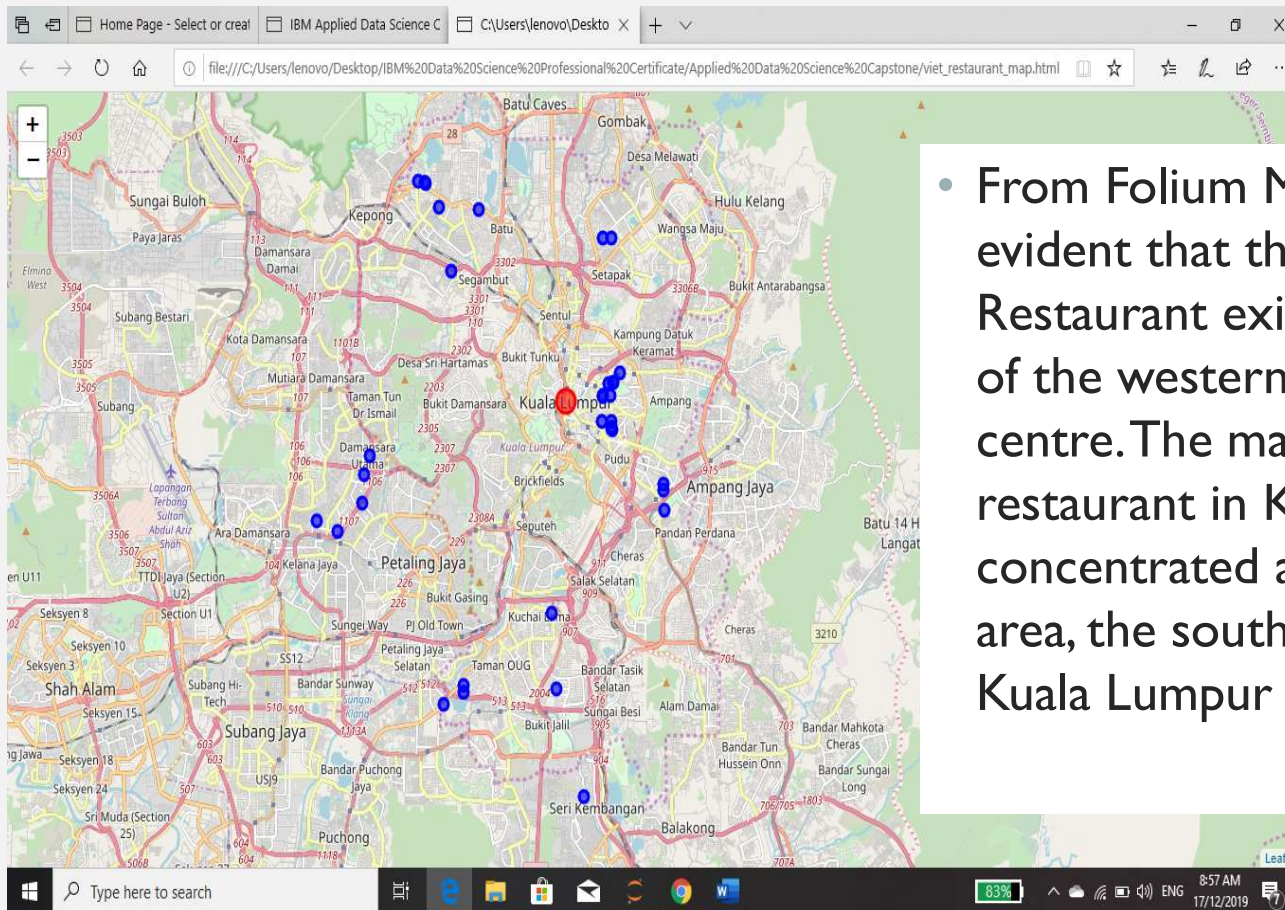
# METHODOLOGY



- The project methodology aims to follow the IBM Data Science Methodology as close as possible depending on the nature of the project
- The planning stage which involves business understanding to identify the appropriate data requirements.
- The data collection stage which involved collection, preparation, analysis and evaluation.
- The results, discussion, limitation, recommendation, conclusion and scope for future improvement.



# RESULTS



- From Folium Map visual observation, it is evident that there is no cluster of Vietnamese Restaurant exist in the immediate 5km radius of the western part of Kuala Lumpur city centre. The majority of the Vietnamese restaurant in Kuala Lumpur City centre concentrated at the northwestern, eastern area, the southern, southwestern area of Kuala Lumpur city centre.

## DISCUSSION

- Though the visual observation has shown that immediate western part of Kuala Lumpur City offers the most optimum or strategic location for opening a Vietnamese Restaurant, further investigation recommended, for example performing a field trip to analyse and understand why no Vietnamese restaurant existed in that western part of the Kuala Lumpur city.



## RECOMMENDATIONS

- The western area of Kuala Lumpur city offers strategic opportunity and it is recommended that effort is focused on investigating the feasibility of opening a Vietnamese Restaurant within a 5 km radius toward the western area of the latitude and longitude of Kuala Lumpur: 3.1516636, 101.6943028





## CONCLUSION

- The project commences with identifying business needs, problems and target audience as an input to plan the data source, gathering method and analysis techniques to meet the expectation of business. Though from the data and visual analysis, the western part of Kuala Lumpur city offers the most optimum location for opening a Vietnamese Restaurant, a field feasibility study investigation recommended drilling further before confirming the investment.

