Week1

CodeStorm

The CodeStorm Challenge is an intense coding competition designed to test participants' programming skills, problem-solving abilities, and communication prowess. In this challenge, participants will be required to solve a total of 30 intricate coding questions that cover a wide range of algorithms, data structures, and programming paradigms.
The challenge aims to evaluate participants on their coding efficiency, algorithmic thinking, and presentation skills. Participants will need to not only implement correct and optimized solutions to the coding problems but also effectively communicate their thought processes and strategies in the form of a video presentation.

- Coding Skills: We'll look at how accurately and efficiently you solve coding challenges, write clean code, and avoid bugs.
- Problem Solving: We're interested in your ability to come up with smart solutions for different types of problems using algorithms and break them down into smaller parts.
- Managing Time: You need to balance your time between solving problems
- Good time management is key.
- Being Adaptable: We want to see how well you can adjust your strategies to solve different problems using different approaches.

Link to collab -
https://colab.research.google.com/drive/192X2C5hVBo55WCveD5-0XHlvsD2h-y52?usp=sharing

Week 2

Business Context
Since 2008, guests and hosts have used Airbnb to expand on travelling possibilities and present a more unique, personalised way of experiencing the world. Today, Airbnb became one of a kind service that is used and recognized by the whole world. Data analysis on millions of listings provided through Airbnb is a crucial factor for the company. These millions of listings generate a lot of data - data that can be analysed and used for security, business decisions, understanding of customers' and providers' (hosts) behaviour and performance on the platform, guiding marketing initiatives, implementation of innovative additional services and much more. This dataset has around 49,000 observations in it with 16 columns and it is a mix of categorical and numeric values. Explore and analyse the data to discover key understandings.

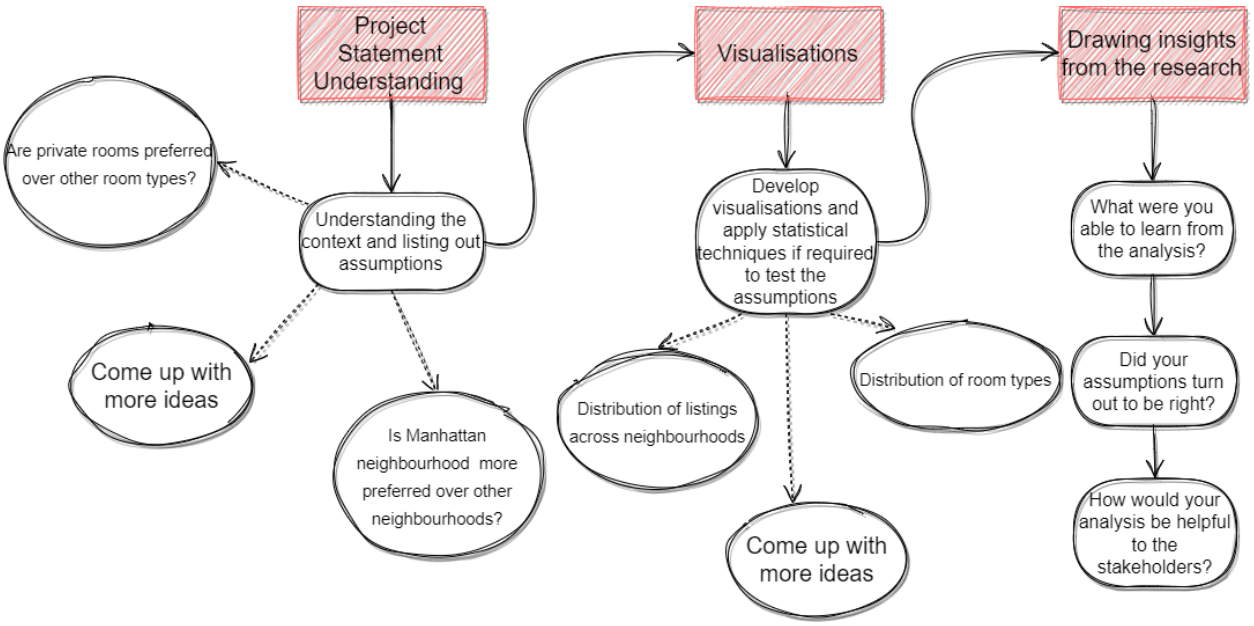
Dataset Description

Field	Description
id	Unique ID
name	Name of the listing
host_id	Unique host_id
host_name	Name of the host
neighbourhood_group	location
neighborhood	area
latitude	Latitude range
longitude	Longitude range
room_type	Type of listing
price	Price of listing
minimum_nights	Minimum nights to be paid for
Number_of reviews	Number of reviews
last_review	Content of the last review
reeviews_per_month	Number of checks per month
calculated _host_listing_count	Total count
availability_365	Availability around the year

Main Libraries to be used:

- Pandas for data manipulation, aggregation
- Matplotlib and Seaborn for visualisation and behaviour with respect to the target variable. Use at least 10 different visualisations.
- NumPy for computationally efficient operations

Project Architecture:



- **Efficient approach to the problem statement**
- **Data Exploration techniques and logic.**
- **Logic of handling missing values, and outliers.**
- **Visualization logic.**
- **Forming insights and explaining your understandings**
- **Understanding of how your project is useful to stakeholders.**

Rubrics

Rubrics	Weightage
GitHub Commits	5
Summary and Technical Documentation	10
Exploration, Namely: Head, Tail, Summary, Data Dictionary	5
Looking for and Handling NaN/ Null/ Missing Values	5
Trying To Get Some Conclusion From Data, Correlation, Trends	10
Accomplish Various Milestones Given in the Problem Statement	10
Using Visualization (Atleast Five Different Types) for Presenting the EDA	15
Final Summary of Conclusion	5
Commented Code	5
Proper Output Formatting	2.5
Modularity of Code	2.5
Video Presentation	20
Fluency and Grammatical Accuracy in PPT and Video	5

EDA Sample Project-
https://colab.research.google.com/drive/1jHBzn3quYXigKDniOzFC9jz1TInF1JMv?usp=sharing

Link to Dataset-

https://drive.google.com/file/d/1Nn-jKdZCIgQrOOSztGRYHm-jwo4wluAJ/view?usp=sharing

Project Checklist

- Prob statement
- Business context
- Data understanding
- Data loading and cleanup
- Listing hypothesis/assumptions.
- Visualisations- at least 5.
- Statistical analysis if required.
- Remarks for each analysis.
- Conclusion of the project.
- Github Commits at regular intervals

Project Submission Timeline

Week1

Project Submission-8th October

Project Presentation-14th October

Week 2

Project Submission-15th October

Project Presentation-19th October

Week 3

Project Submission-22nd October

Project Presentation-25th October