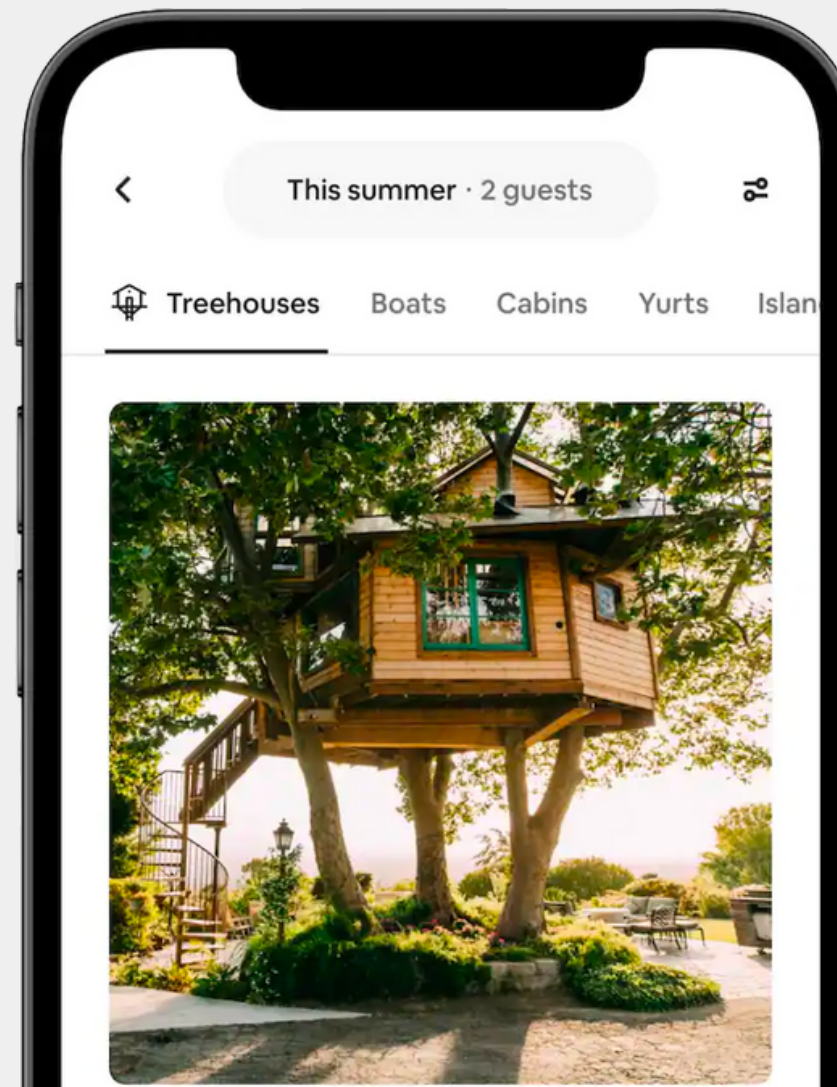# Airbnb Data Analysis

IMT 562 - Interactive Information Visualization

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Agenda

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Introduction

A comprehensive look at Airbnb prices in some of the most popular European cities.

Each listing consists of various attributes such as room types, cleanliness and satisfaction ratings, bedrooms, distance from the city center, and more to capture an in-depth understanding of Airbnb prices on both weekdays and weekends.

Dataset:

https://www.kaggle.com/datasets/thedevastator/airbnb-prices-in-european-cities

Data Preprocessing

Using Python, we read all the city files into a pandas dataframe to make the following transformations:

1) Creation of 'City' Column
   - Extracted city from the file name and add it as an attribute to enable filtering based on city.

2) Creation of 'isWeekend' Column
   - One Hot Encoding – Boolean column with value 1 if data is from a weekend file and 0 if not.

3) Union
   - Concatenated all individual dataframes to form the master data file

```python
[1]:  import pandas as pd
      import os

[3]:  directory = 'data/'
      data = []
      for filename in os.listdir(directory):
          city = filename.split('/')[-1].split('_')[0].title()
          print(f'Reading {directory+filename} data')
          city_df = pd.read_csv(directory+filename)
          city_df['City'] = city
          if 'weekday' in filename:
              city_df["isWeekend"] = 0
          else:
              city_df["isWeekend"] = 1
          data.append(city_df)

      df = pd.concat(data, axis=0, ignore_index=True)
      # Checking to ensure its all good
      df.columns
      # Dropping Unnamed
      df.drop('Unnamed: 0', axis=1,inplace = True)
```

Topic 1 - A one-stop, Zillow-style landing page to shortlist the dream destination

Link: https://public.tableau.com/app/profile/sonali.basu/viz/ZillowStyleLandingPageforAirBnb/AirBnB?publish=yes

Topic 2: I am a Data Analyst at Airbnb
Link: https://public.tableau.com/shared/5G33XDD4F?:display_count=n&:origin=viz_share_link

Data Visualization Walkthrough

Topic 3 – Room Types, Value for Money & Comparison

Link:
https://public.tableau.com/views/IMT562Project_AirBnBDataAnalysis/Story1?:language=en-US&publish=yes&:display_count=n&:origin=viz_share_link

Data Visualization Walkthrough

Topic 4 – Business and Leisure AirBnbs for Athens
Link: https://public.tableau.com/app/profile/ketki.godse/viz/IMT562Project-3/Story1?
publish=yes

Q&A

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