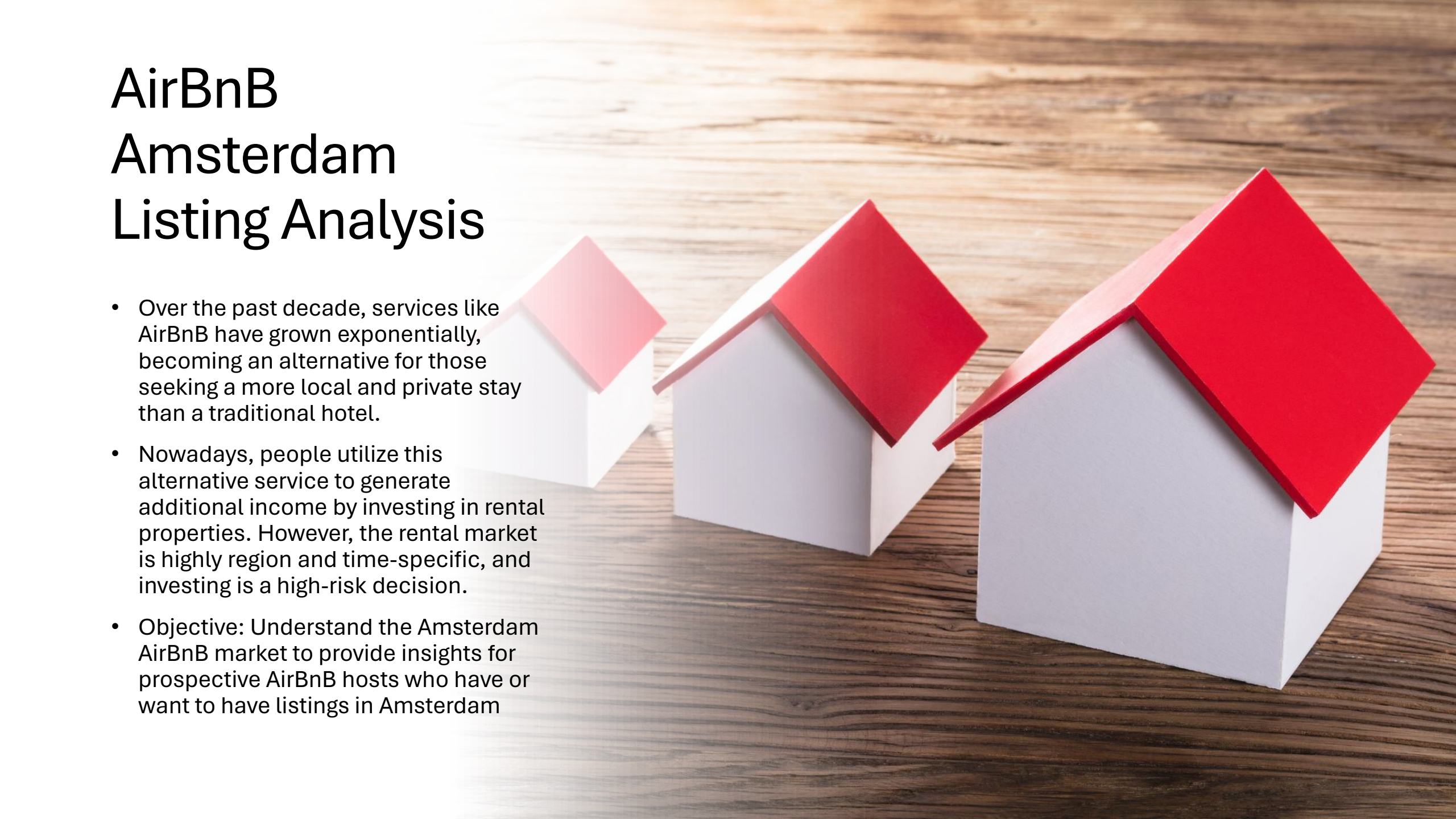
AirBnB Amsterdam Listing Analysis



- Over the past decade, services like AirBnB have grown exponentially, becoming an alternative for those seeking a more local and private stay than a traditional hotel.
- Nowadays, people utilize this alternative service to generate additional income by investing in rental properties. However, the rental market is highly region and time-specific, and investing is a high-risk decision.
- Objective: Understand the Amsterdam AirBnB market to provide insights for prospective AirBnB hosts who have or want to have listings in Amsterdam

Overview

Key Questions

- What Types of listings exist? Can we find patterns in price and popularity?
- Are Cheaper Listings more reviewed and more occupied?
- Are Better Reviewed Listings more reviewed and more occupied?

Data

Kaggle project Airbnb Amsterdam (source: insideairbnb.com)

Data Dictionary

Tableau StoryBoard

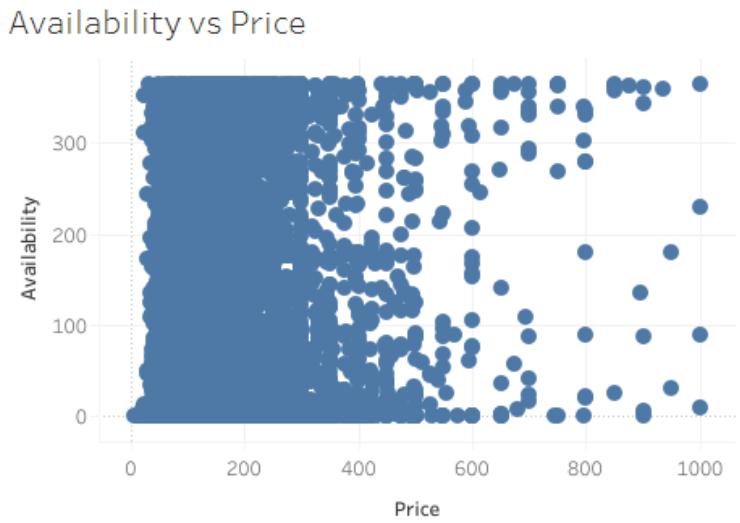
Github Repository

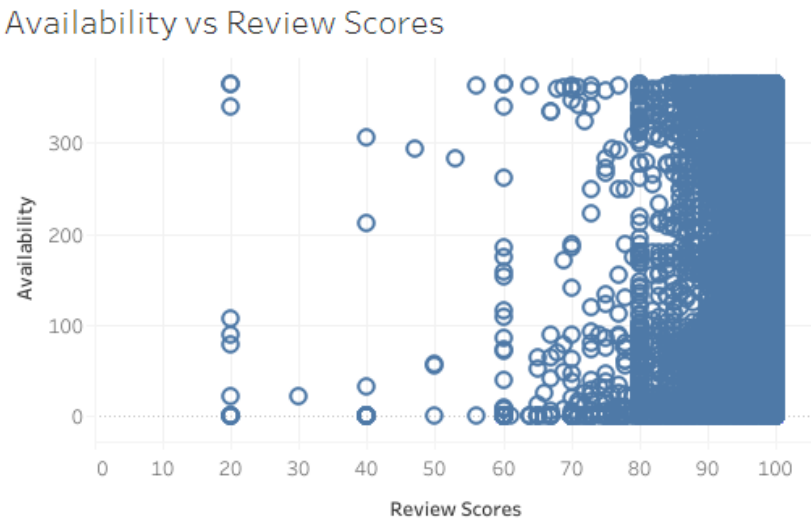
Skills

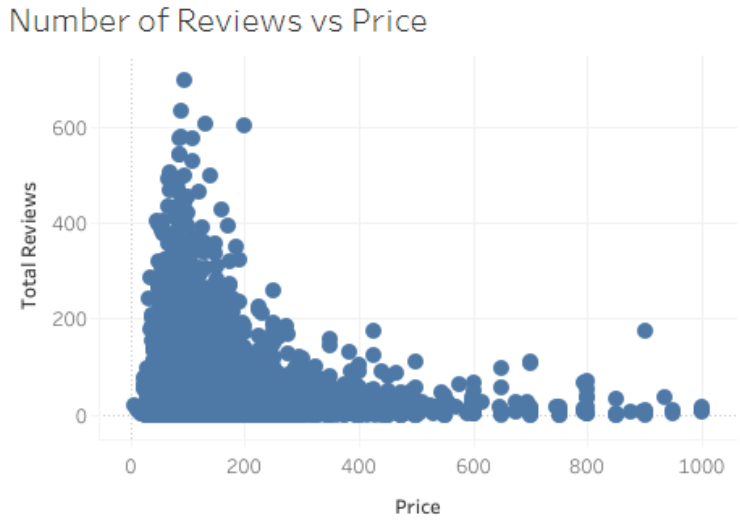
- Python
- Data wrangling & subsetting
- Data consistency
- Data combining & exporting
- Deriving new variables
- Grouping data
- Aggregating variables
- Data visualization with Python
- Time series analysis
- GitHub
- Tableau Storyboards

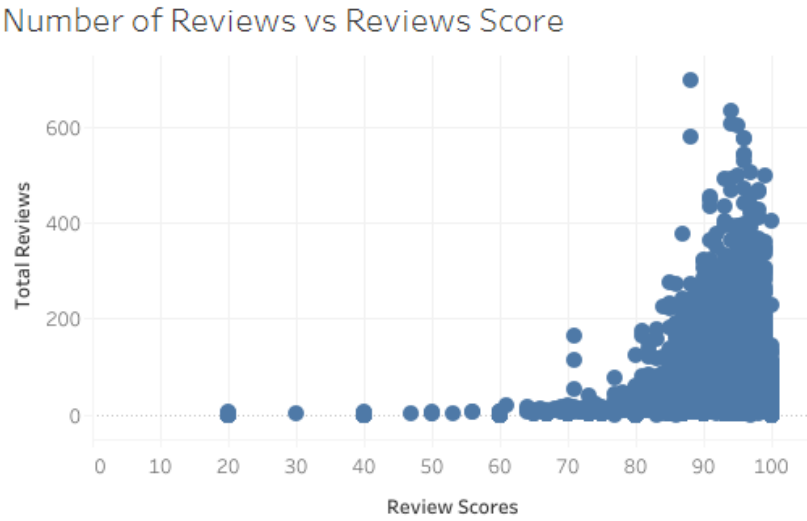
Exploratory Data Analysis

- The spread of number of reviews and availability varies in an oposite manner for price and review scores
- This is likely due to the low amount of datapoints for low reviewed / highly priced listings and not indicative of a major pattern



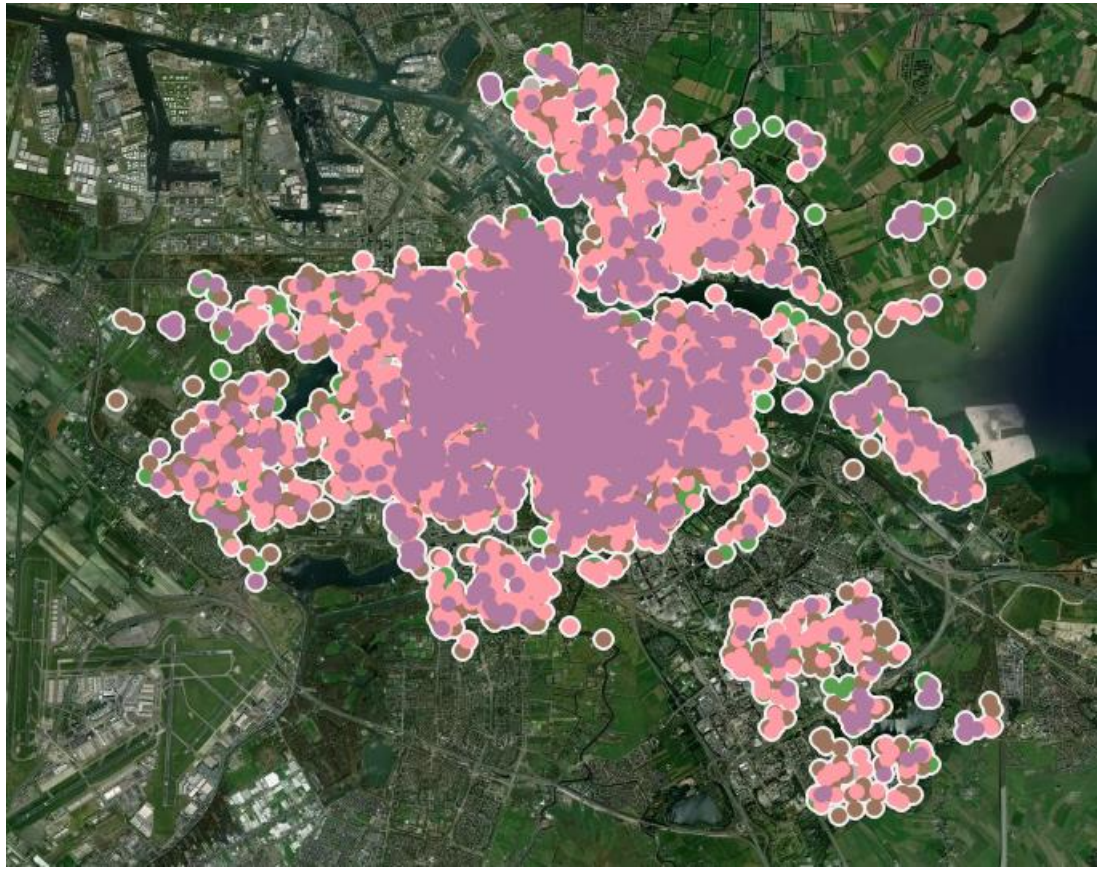


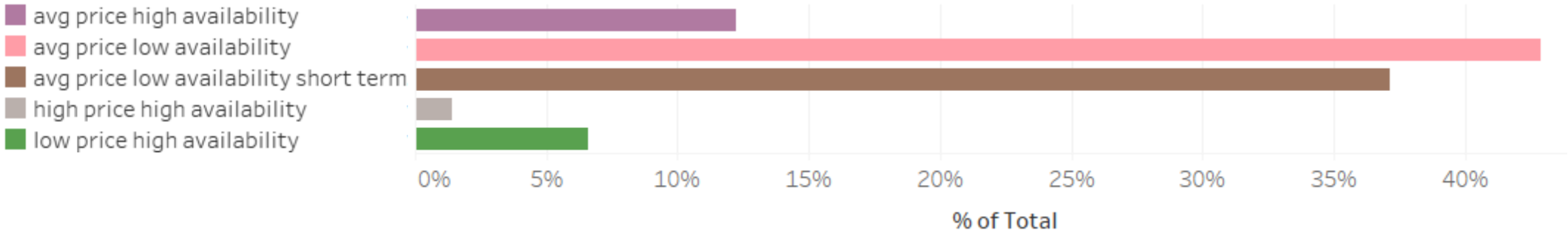




Clustering Analysis

- Due to difficulty in establishing relationships between the diferent variables, I resorted to k-means clustering. There is no major geographical pattern to the different kinds of rentals found, outside of high price listings being more present in center districts.
- A majority of the listings have low availability, below 25 available nights for the following 365 days.
- Rentals with low availability are averagely priced, while the high and low-price rentals have higher availability.
- Other variables (rating score, minimum and maximal rental times) where taken into account, but no discernable pattern was found within those variables.





Neighbourhood Statistics

As can be seen from the charts below, high price neighbourhoods are located in the centre of Amsterdam, as well as the Marina, a zone known for nightlife and higher income individuals.

Average Ratings per neighbourhood don't vary greatly, being located in a tight window and being generally all very high.

Average Price per neighbourhoood

Average Rating per neighbourhoood

Conclusions

The AirBnB listing market is extremely competitive, with over 75% of listings being similarly priced and having limited availability throughout the year.

Rating Score does not seem to greatly affect the occupancy or review counts of listings, outside of outliers with very low score (below 60)

Prices that are very below or above the average price have less occcupancy, but no different review counts.

Only high price listings show geographical clustering in the central distritcts of Amsterdam

Next Steps

- Obtain similar data for other periods of time, to be able to improve assessment of current trends and forecast rental market development.
- Obtain more complete data for host response rate/response time to evaluate the effect of those metrics on the availability of listings
- Evaluate how the amenities present in the house affect availability
- Evaluate if the host's superhost status (highly rated host) affects listing availability.

Contact info

Reach out at: