



## Where to Stay in Hawaii in April 2019

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## Project Objective

Our group will be exploring Honolulu, the hottest destination for Torontonians stranded amidst the blistering winter weather. We are scraping the web to find a good deal for hotels/air-bed-and-breakfasts as well as good restaurants to check out in April 2019.



## Research Questions

- Can we find the best value if we choose the amenities of a hotel?
- Will we save more per night if we choose Room Rentals?
- What restaurants can we visit while we are in the city?





# Methods

## Web Scraping

- TripAdvisor
- VRBO
- YELP

## Manipulation

- Pandas
- Jupyter Notebook

## Web Scraping Modules

- BeautifulSoup
- SQLAlchemy

## Plotting

- Plotly.js



## Project Summary

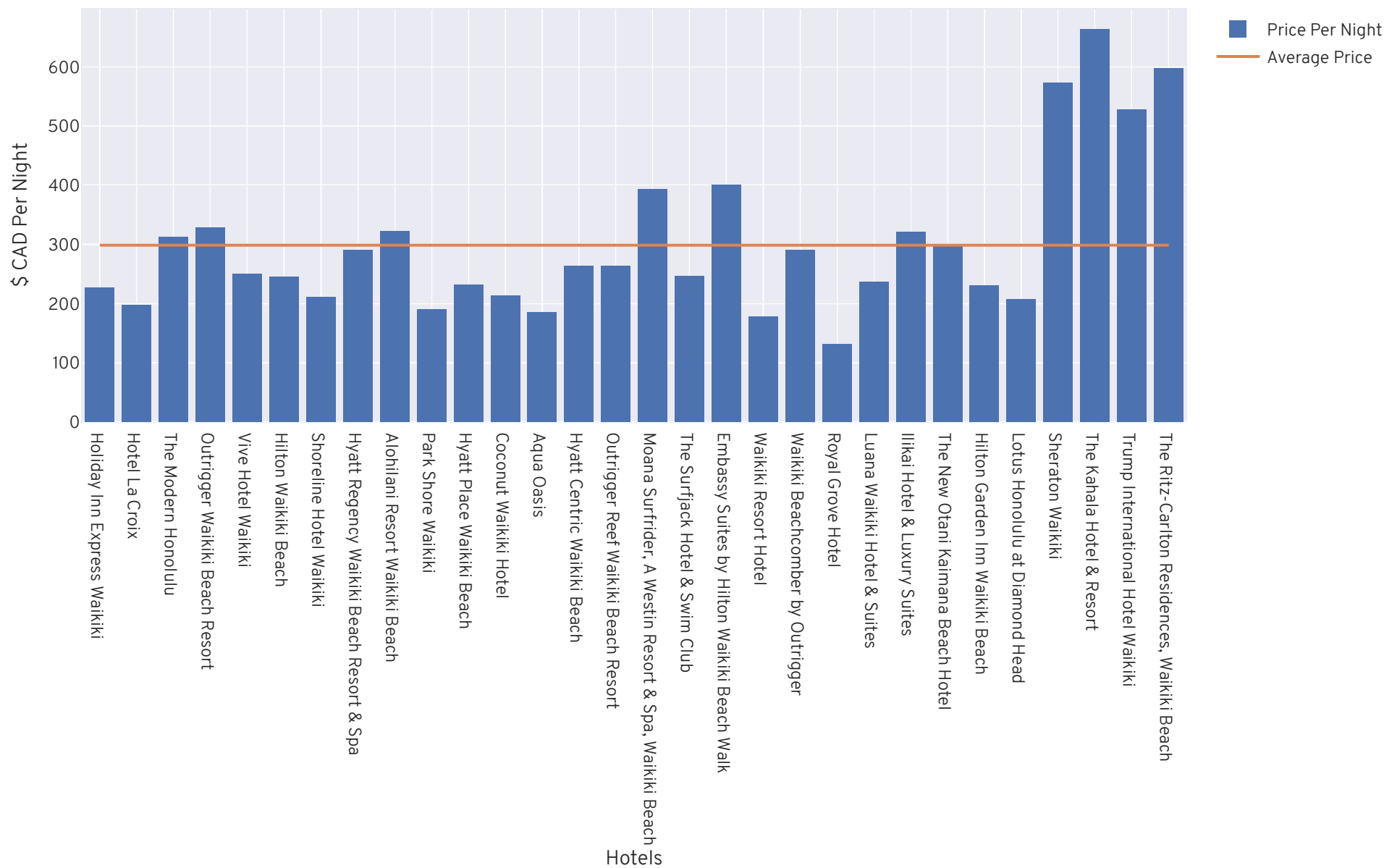
- We explored vacation-planning websites such as Tripadvisor, Cheapoair, Expedia and Airbnb to see if we can scrape their websites for data; in the end we were able to extract data from Tripadvisor, VRBO and Yelp for hotels, resident rentals and restaurant ratings in Honolulu, Hawaii.
- Using the python module requests we were able to establish a connection with website urls, and parse the html files into beautiful soup objects. Then we extracted titles of hotels and personal rentals, as well as price per night from Tripadvisor and VRBO. We were also able to obtain restaurant titles and star ratings from Yelp for hot restaurants in Honolulu.
- After extracting the data, we used Pandas to clean and format the data into three dataframes, for hotels, rentals and restaurants.
- We exported the dataframes to CSV format.
- All data contained in the CSV files were uploaded to an in-memory relational database using SSQAlchemy.
- The resulting tables: hotels, rentals and restaurants are final and able to be queried.
- We were able to plot our key graphs and findings using Plotly and answer our question to find the hotel and eating joints in Honolulu.



## Key Findings

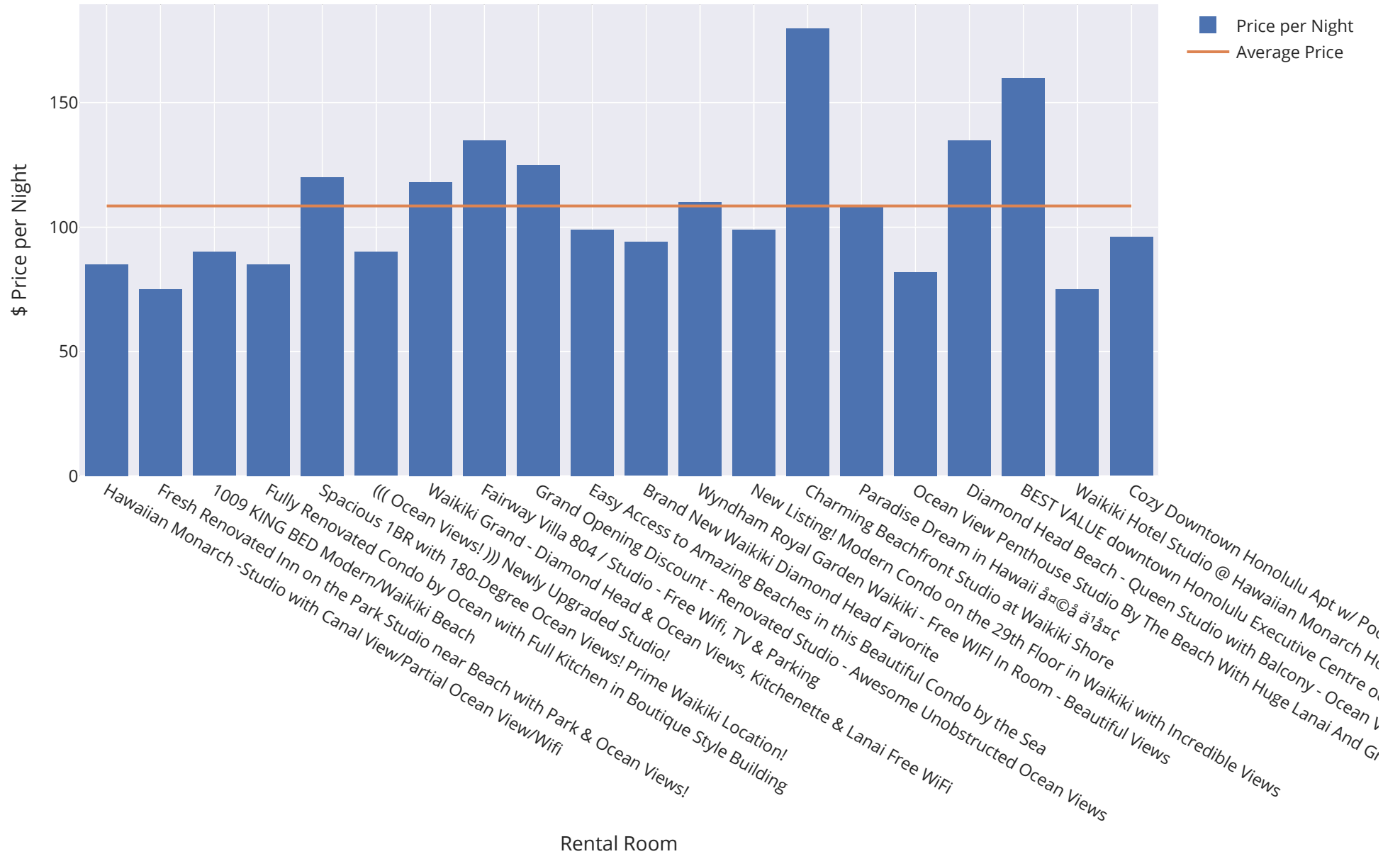
- According to TripAdvisor, the average price per night (if we were to stay in hotels), is \$298.16.
- According to VRBO, the average price per night (if we were to stay in rental rooms), is \$108.50.
- Most restaurants in beachside Honolulu average a rating between 4 and 4.5 stars.

# Hotel Prices in Honolulu



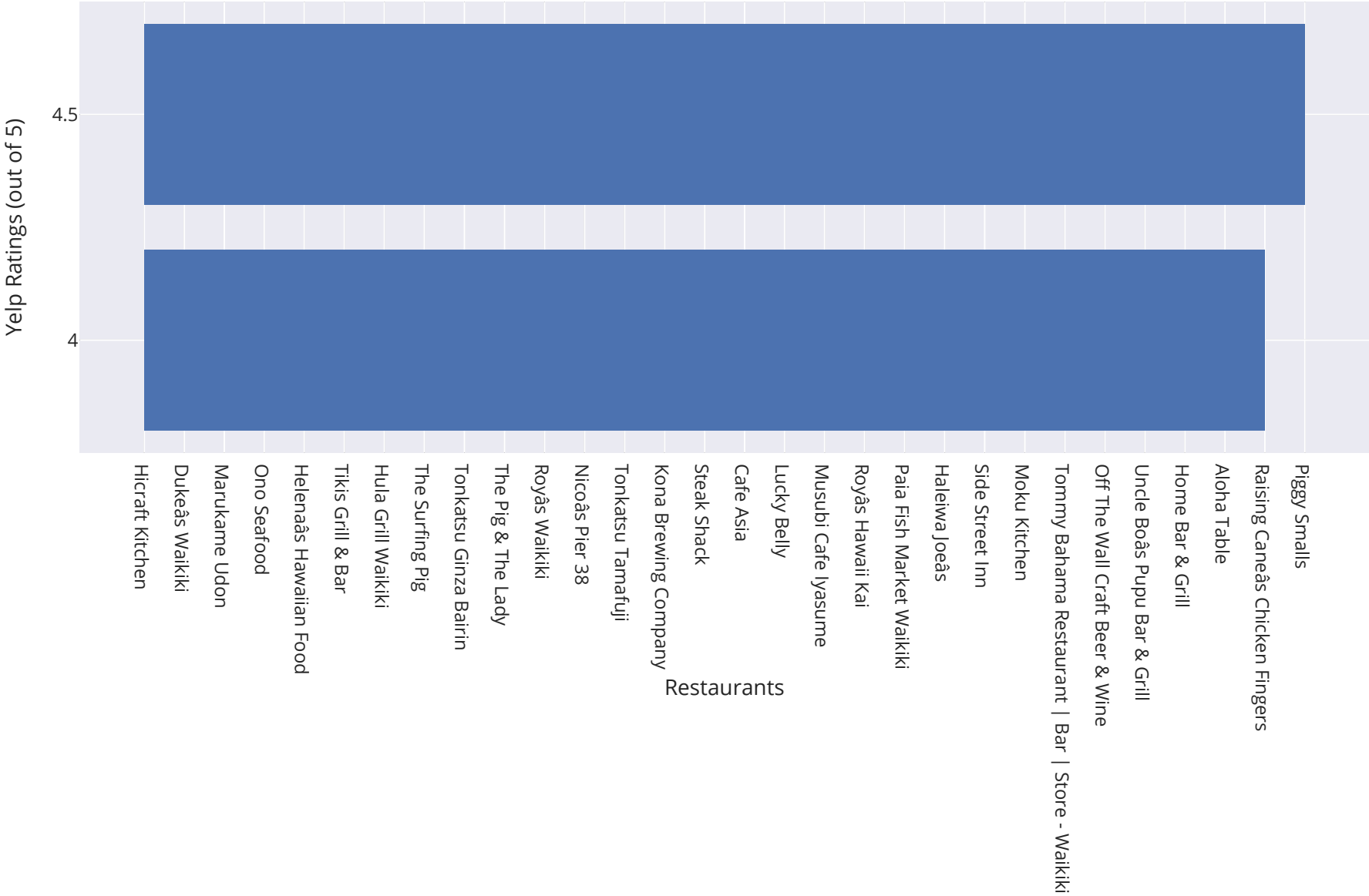


# Rooms for Rent in Honolulu





Ratings for Nearby Restaurants





## Conclusions

- Honolulu does seem to be a hot option for us to visit.
- Bed and Breakfast seems to be a cheaper option than Hotels.
- We have good rated eating options in the area.
- There is certainly an opportunity to find package and flight deals.

## Limitations

- There was a major setback in terms of scraping all the data that we needed. Flight data was difficult to scrap. We had to divert to looking for other datasets.
- We encountered a major setback in scraping package deals (flights and hotels) due to 404 Errors on websites we were expunging data from.
- Our findings are based on prices and therefore cannot be based on the quality of living offered.

