



Airbnb Lodging Prediction in New York

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Outline

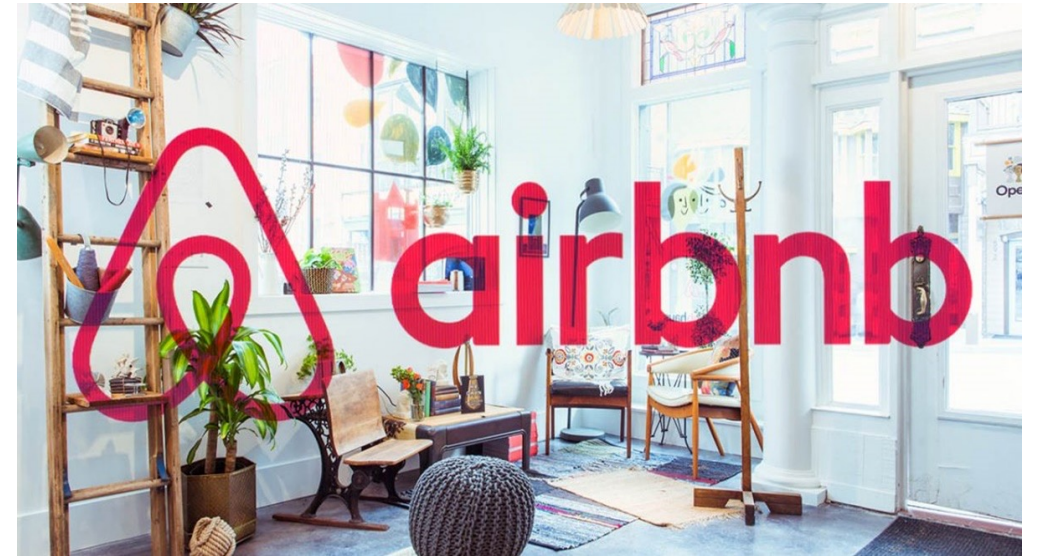
- Overview
- Data Involved
- Approach
- Improvements
- Recommendation
- Conclusion

Overview

To provide predictions of the most frequented neighborhoods in New York

The consumer's behavior

Price point



Data Involved

- Dataset used in this project provided on [Kaggle](#)
- Main categories: Neighborhood, Service Fee, and Minimum Nights
- Time of year also considered



Approach

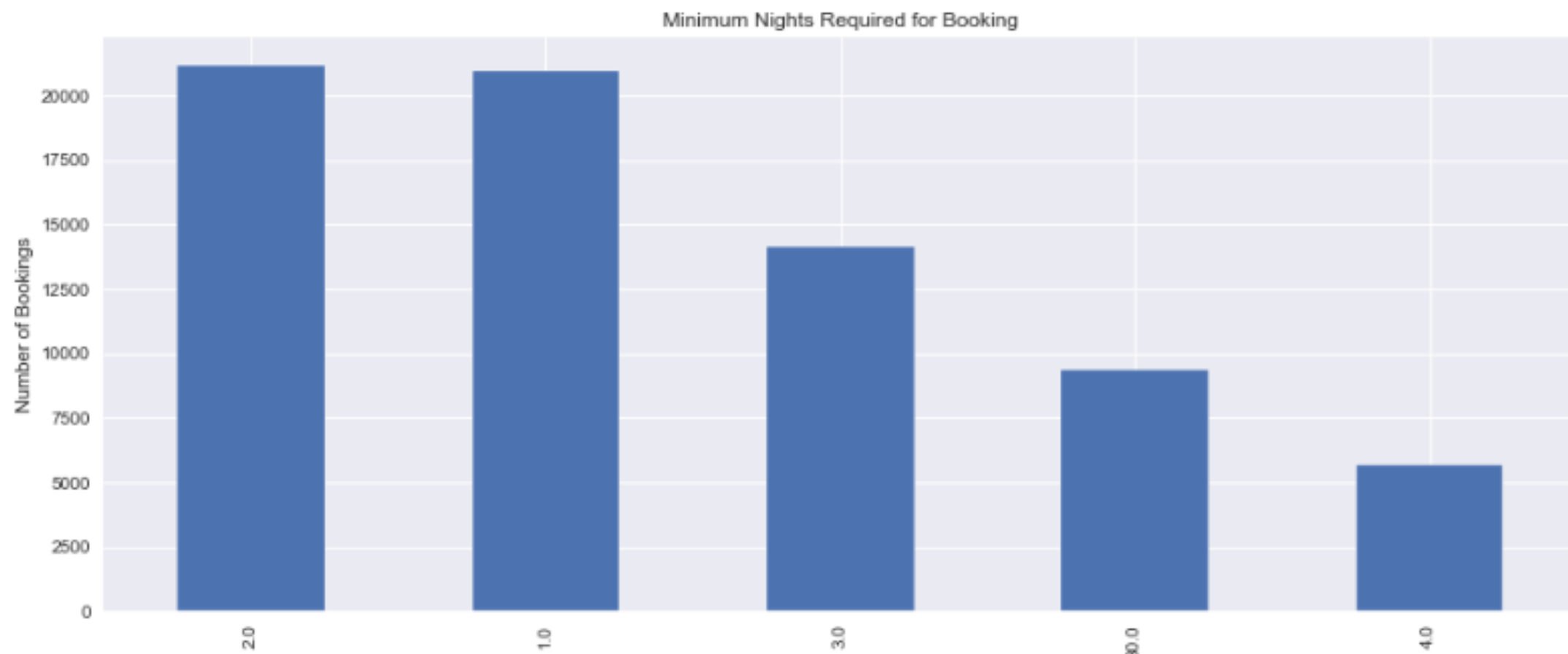
- Questions:
 - Where do people stay the most?
 - How long?
 - Does time of year affect price?
- Apply several ML techniques

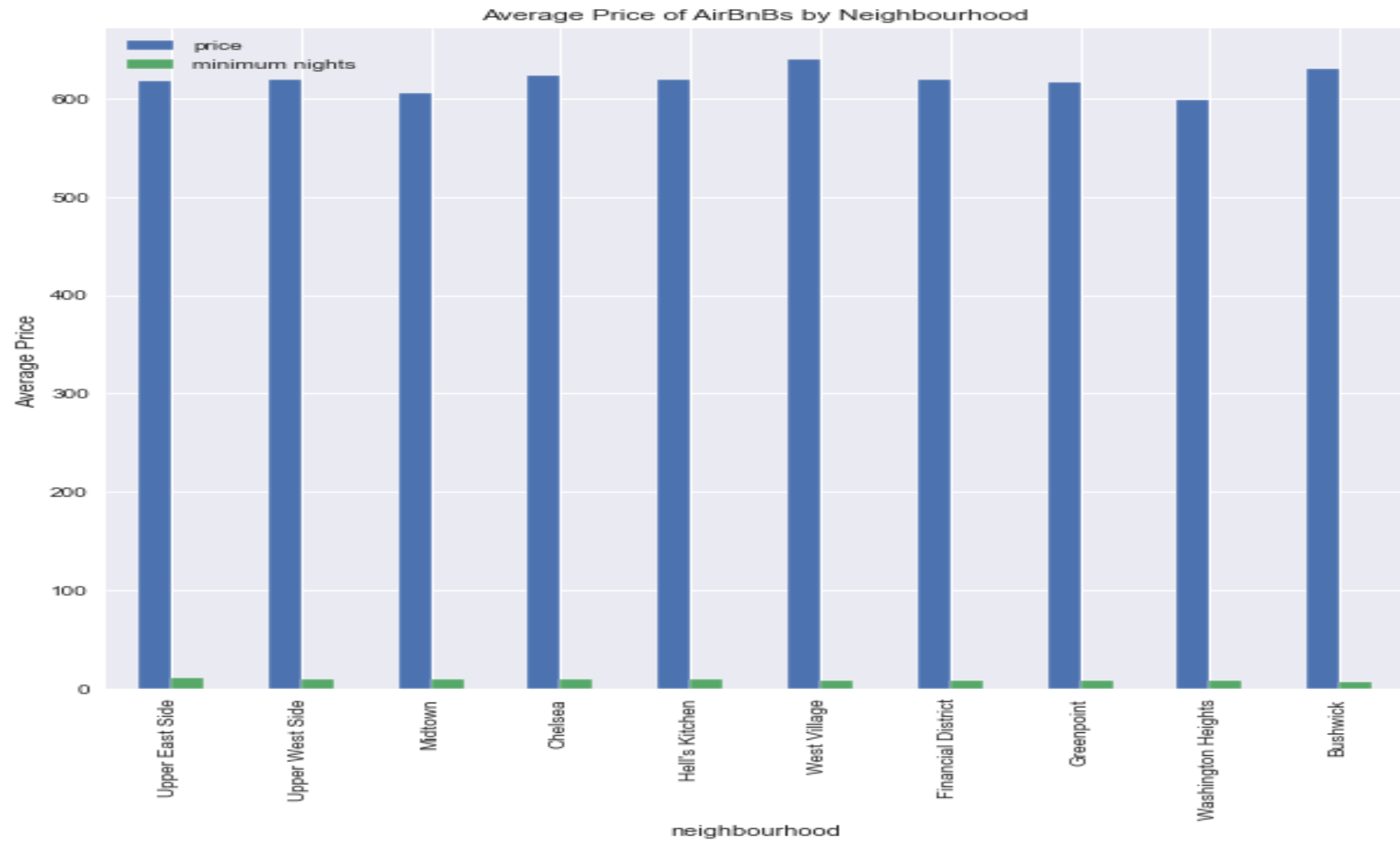




Results

- XGBoost was used for predictions
- The **best** model was just \$39 off
- Most **popular** areas were in Manhattan and Brooklyn
- Data of booking **did not** affect price as much





Improvements

- Fine tuning parameters of the ML techniques used
- Consider seasonal holidays & popular events
- Analyze customer's reviews



Recommendations

- Consider focusing business efforts on **Brooklyn** and **Manhattan**
- Expect most customers to spend **1-2** nights
- Notify users of **most expensive** areas on Airbnb's platforms (Website/ App)

	price	minimum nights
neighbourhood		
Flatbush	649.732291	5.634775
West Village	639.384052	8.522622
East Flatbush	638.896584	7.335646
Prospect-Lefferts Gardens	637.556751	5.952252
Astoria	636.775719	6.466647
Bushwick	629.920770	7.470310
Other	627.626126	7.092746
Harlem	626.583829	7.300790
Lower East Side	624.380895	6.172859
Williamsburg	623.298192	6.774705

Conclusion

- Expect the **most** stays in Manhattan and Brooklyn
- People tend to stay 1-2 nights
- Date of booking **did not** affect price a lot
- Focus **business efforts** in the more popular areas



Thank You

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