



# Airbnb Lodging Prediction in New York

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# Outline

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# Business Problem

- Many customers are disgruntled at the Airbnb's fees/prices
- What factors can Airbnb adjust to impact the total price?
- An [article](#) from Fast Company states that 27% of travelers don't use Airbnb because renting a home is too expensive

Here's a quote from a customer found on [Buzzfeed](#):

*"My husband and I just do hotels now. Airbnb hosts have gotten so ridiculous with their pricing and expectations, we may as well stay home. The last one we went to wanted an additional \$5 per person for hot tub use and they had cameras in the back."*





# Data Involved

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- Dataset used in this project provided on [Kaggle](#)
- Main categories: Neighborhood, Service Fee, and Minimum Nights
- Data is from 2012 – 2022
- Over 86,000 bookings were analyzed





# Approach

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- **OLS Regression** to find most impactful variables to price
- Use most impactful variables for recommendations
- **Regressor tree** models to predict prices of Airbnbs





## Results

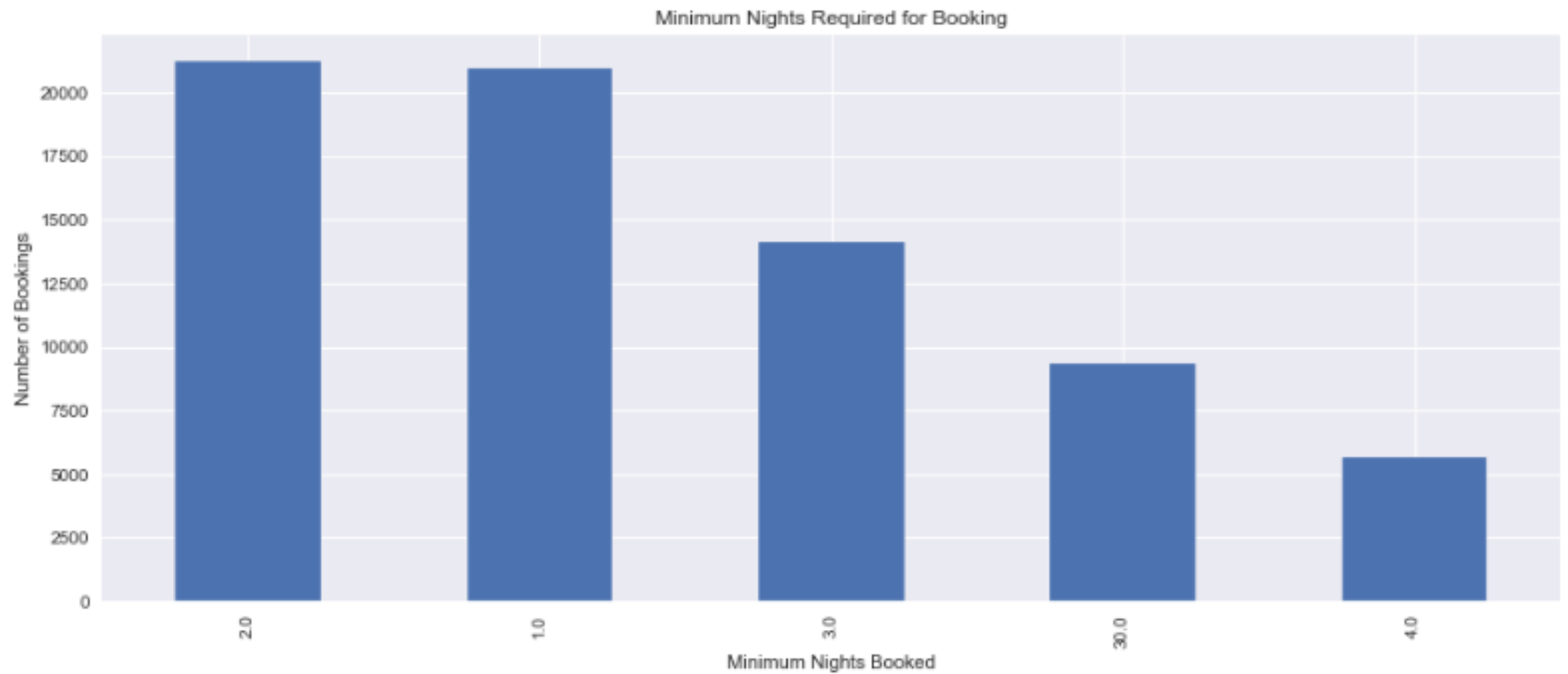
- XGBoost was used for predictions
- The **best** model was just \$39 off
- Being available 365 days/year
- Reviews/month matter



# Results

The service fee is the  
biggest contributor  
to final price

West Village,  
Bedford-Stuyvesant,  
and Upper West Side





# Recommendations

- Consider focusing business efforts on [Brooklyn](#) and [Manhattan](#)
- Reduce service fees
- Be available year round
- Incentivize frequent reviews





# Improvements

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



# Thank You

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