

Learning to Share in the Sharing Economy



Stella Moretti

The “Side Hustle” Economy



ebay



lyft

kindle direct publishing

Etsy

airbnb

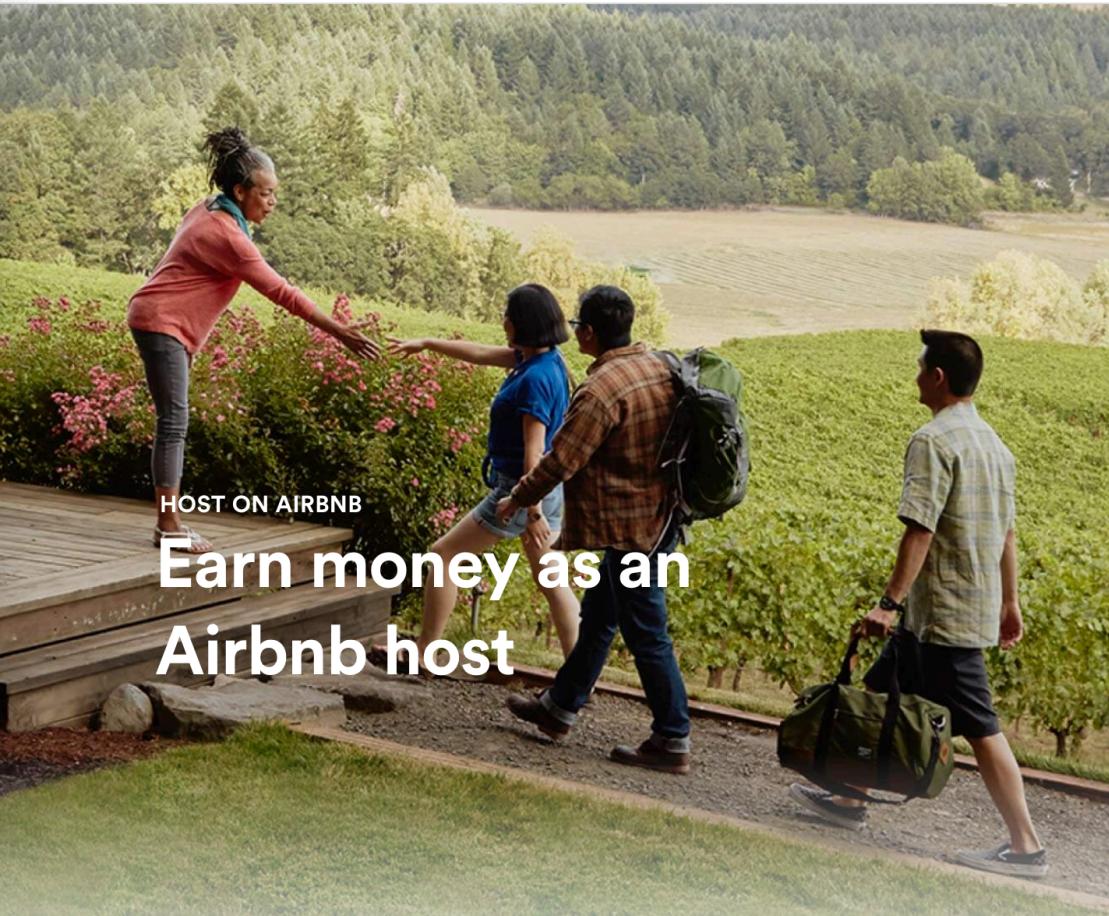
Upwork

U
B E R



amazon mechanical turk

shutterstock



Find out what you could earn

New York

2 Guests

Entire place

\$2,161

monthly potential ?

Get started

DATA

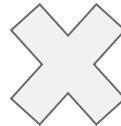


- 40,000 New York listings
- 12 months of reservations
- Neighborhood demographics

RENTAL
INCOME



\$



DATA



- 40,000 New York listings
- 12 months of reservations
- Neighborhood demographics

PRICE MODEL

- Scikit-Learn gradient boosting regressor
- Key features: location, property details
- MAE: \$40

OCCUPANCY MODEL

- Generalized linear model (binomial probability)
- Key features: price, location, property details
- MAE: 7 days

Estimate Your Airbnb Rental Income

Location

Type your zipcode

Describe your listing:

- Entire home
- Private room
- Shared room

Property details

Accommodates: 1

1 2 3 4 5

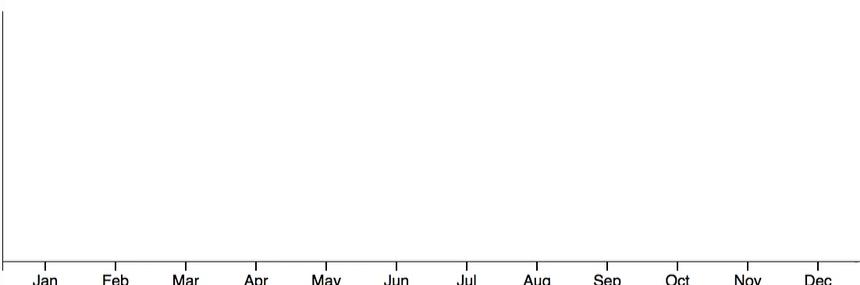
Bedrooms: 1

1 2 3 4 5

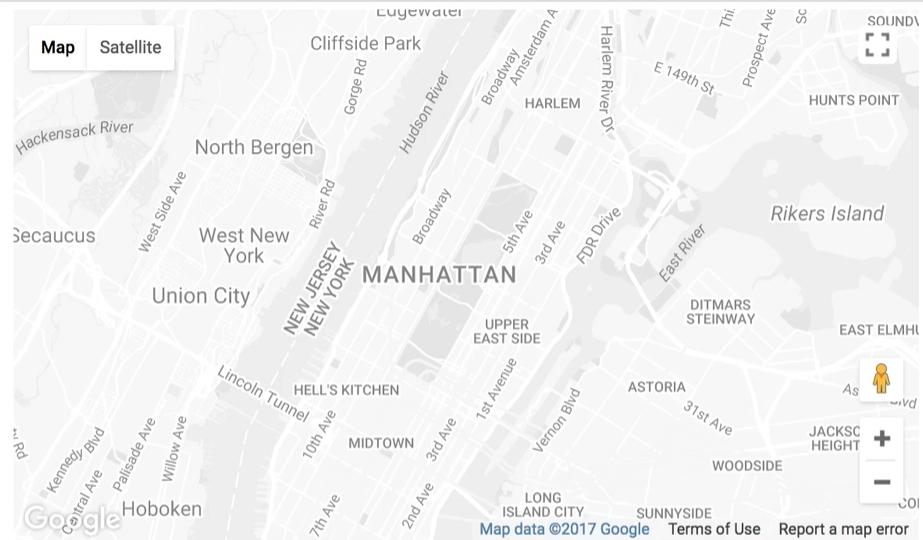
Bathrooms: 1

1 2 3 4 5

% Occupancy per month



Map



Suggested
price per night

\$0

10% LESS

10% MORE

Expected
occupancy

0%

Note: The New York State Multiple Dwelling Law, which covers buildings with three or more units, prohibits transient rentals of fewer than 30 days at a time, unless the owner is present for the time a guest is renting.

Predicted
monthly income

\$0

Airbnb host
service fees

\$0

Let's put it to the test

Airbnb estimate

Find out what you could earn

New York, NY 10012, USA

2 Guests

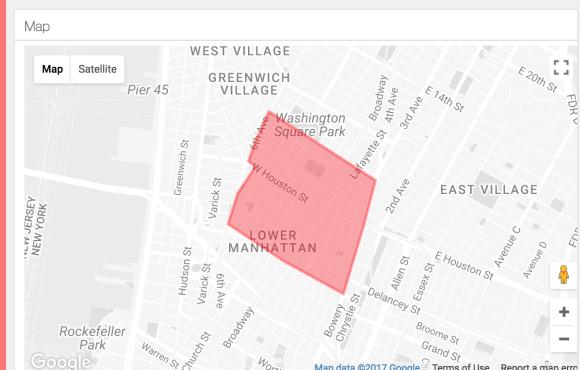
Private room

\$1,429

monthly potential ⓘ

Get started

Model prediction



Suggested price per night

\$127

10% LESS 10% MORE

Expected occupancy

58%

10% LESS 10% MORE

Predicted monthly income

\$2201

Actual

In October 2017:

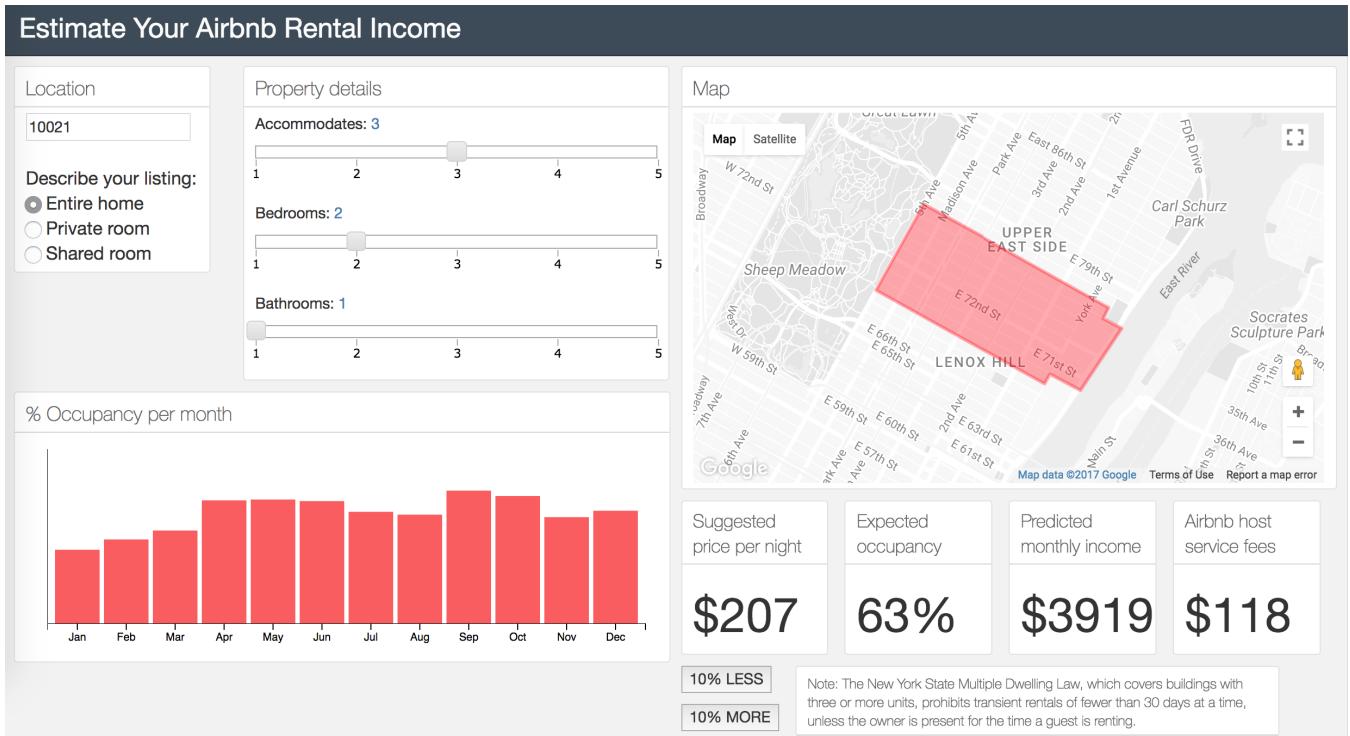
\$121 /night

57% occupancy

\$2080 income

Applications

- Transparent information
- Realistic expectations for Airbnb hosts
- Informative tool for travelers



Thank you



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