AirBnB Price Prediction System
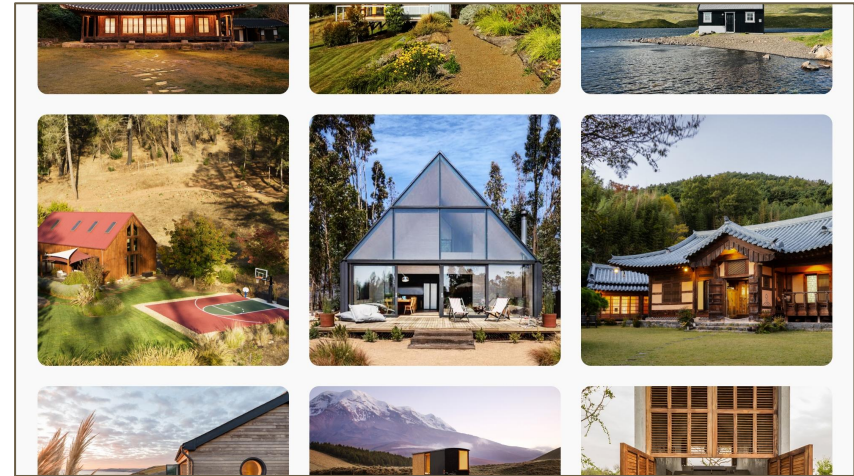
Phase V Final Project
Presented: Skye Jeanat

Agenda

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About the Stakeholder

⌂ New AirBnB Homeowner

⌂ Located in Asheville, Nashville, or Austin

⌂ Max 6 bedrooms

⌂ Offers an entire home/apartment or private room

Data Set Details

Asheville:
- Calendar Data:
  - 958,490 rows
  - 7 columns
  - 12/2021 - 12/2022
- Listings Data:
  - 2,626 rows
  - 74 columns

Nashville:
- Calendar Data:
  - 2,320,689 rows
  - 7 columns
  - 12/2021 - 12/2022
- Listings Data:
  - 6,359 rows
  - 74 columns

Austin:
- Calendar Data:
  - 4,369,416 rows
  - 7 columns
  - 3/2021 - 3/2022
- Listings Data:
  - 11,971 rows
  - 74 columns

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Top Performing Model

- ⌂ <u>Model Characteristics:</u>
  - ⌂ Simple, Random Forest Regressor
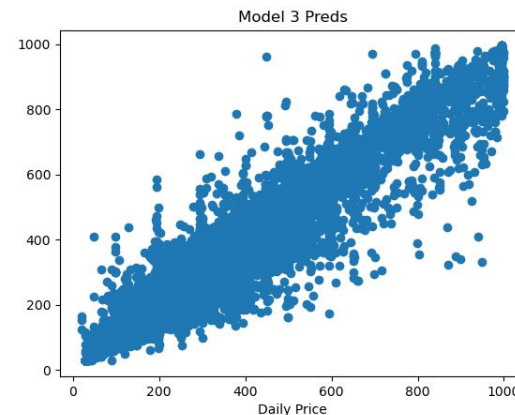- ⌂ <u>Asheville Results:</u>
  - ⌂ Train MAE - $2
  - ⌂ Test MAE - $5

- ⌂ <u>Nashville Results:</u>
  - ⌂ Train MAE - $5
  - ⌂ Test MAE - $12
- ⌂ <u>Austin Results:</u>
  - ⌂ Train MAE
  - ⌂ Test MAE

Model 3 Preds

Summary and Recommendation

⌂ <u>Recommendation:</u>
  ⌂ Utilize a simple, random forest regressor model

⌂ <u>Benefits:</u>
  ⌂ Scientific approach to pricing
  ⌂ Maximize profits

⌂ <u>Next Steps:</u>
  ⌂ Price impacts, inflation
  ⌂ AirBnB experiences
  ⌂ Additional data

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Questions?

Email: sjeanat3@gmail.com

GitHub: https://github.com/sjeanat3

LinkedIn: https://www.linkedin.com/in/skye-jeanat/

Streamlit Exercise

⌂ <u>Link:</u>

○