



airbnb

---

# Increasing Host Engagement

---

Information Type	Context
Relevant Stakeholders	<b>Teams interested in this analysis:</b> <ul style="list-style-type: none"><li>• Host success team and product analytics team</li></ul>
Data Analysis	<b>About the data set:</b> <ul style="list-style-type: none"><li>• Data set found at <a href="https://insideairbnb.com">insideairbnb.com</a></li><li>• Analyzed metrics related to Seattle hosts (2700+ hosts, 3100+ listings)</li></ul>
Secondary Research	<b>What I learned reviewing web articles, and user/host comments and concerns</b> <ul style="list-style-type: none"><li>• Rental price is a big point of discussion for hosts, so Airbnb created Smart Pricing</li><li>• There are many guides/services that help cater a host listing, but little information out there that is data-driven</li></ul>

**What can we recommend to Airbnb hosts to help engage them better and make them more money?**

Airbnb created *Smart Pricing* to make listing prices easier for hosts.

Why don't other features have this same recommending capability?

First, we need to create a way that will let us rank how successful each host is with his/her listing



### Raw data set

- 2700+
- 92 metrics total
- Took 7 most useful features<sup>1</sup>
- Seattle hosts

### Method for ranking

**Revenue Efficiency Score** =  $[(\text{reviews\_per\_month} * \text{price}) - \text{cleaning\_fee}] / 100$

**Revenue Efficiency Rating** splits *review\_efficiency\_score* into 3 groups<sup>2</sup>:

- High revenue efficiency host = **high\_rev\_eff** = top 25 percentile
- Medium revenue efficiency host = **med\_rev\_eff** = 25 – 75 percentiles
- Low revenue efficiency host = **low\_rev\_eff** = 75 – 100 percentiles

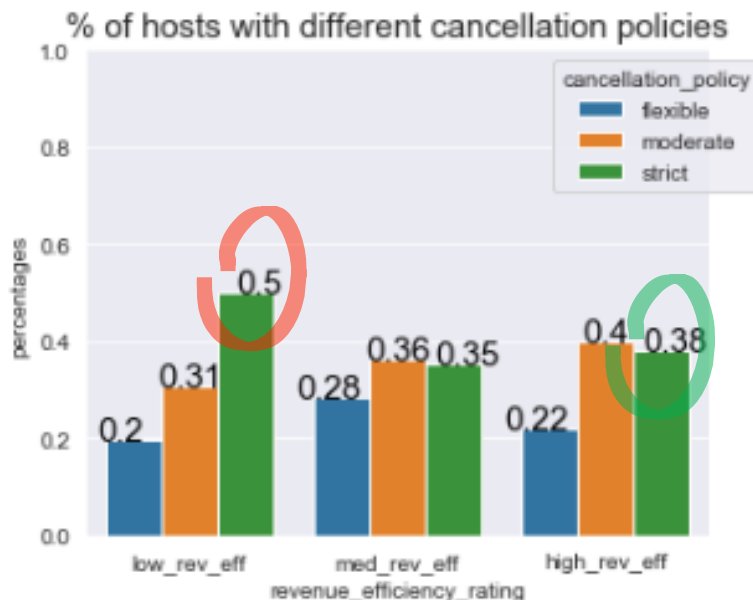
**Revenue efficiency score** lets us estimate how much revenue per month hosts are making from their listing. **Revenue efficiency rating** lets us rank them in 3 groups.

# Low Revenue Efficiency Hosts are tougher to book

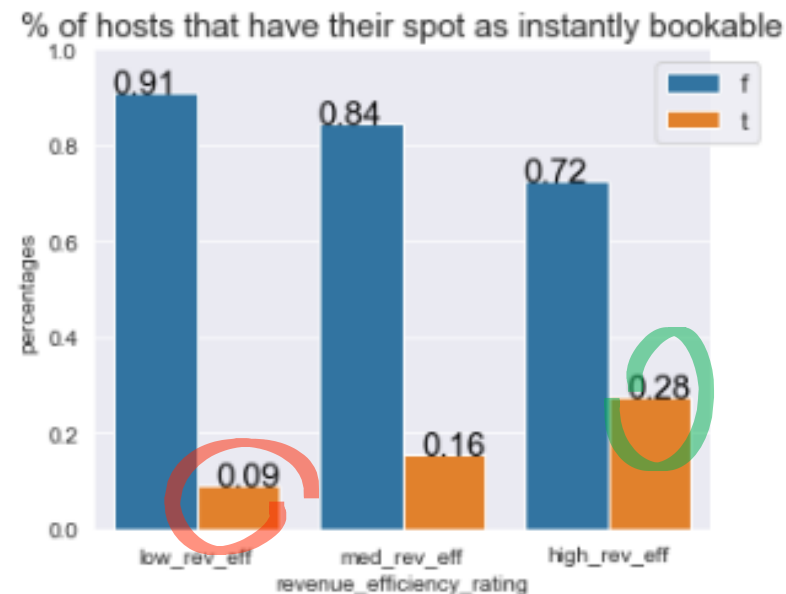


Low Revenue Efficiency hosts are...

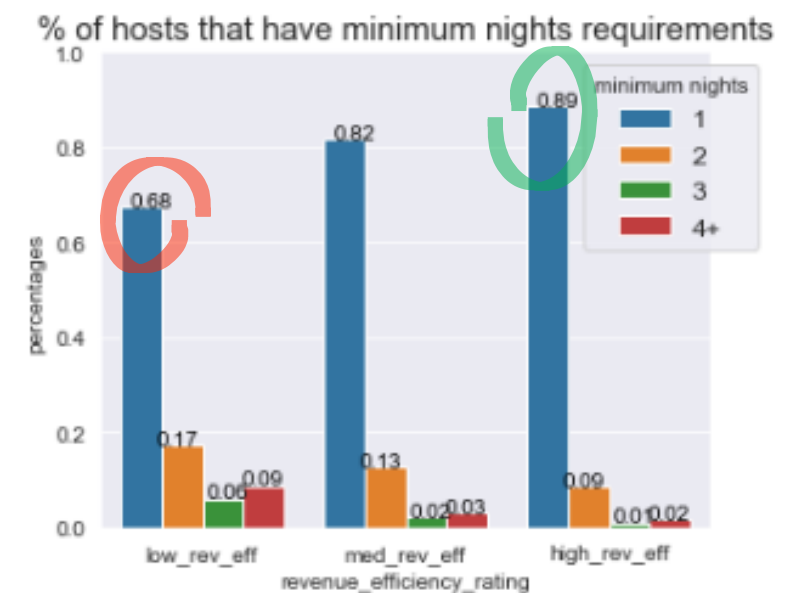
Too strict with their cancellation policies<sup>3</sup>



Not as likely to give guests the chance to instantly book



Setting cumbersome minimum night requirements

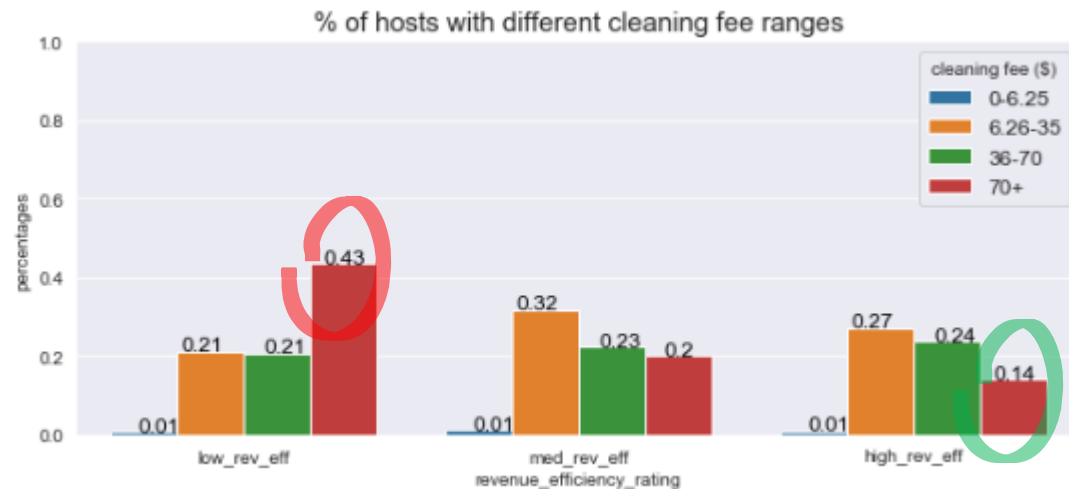


# Low Revenue Efficiency hosts could adjust their prices better

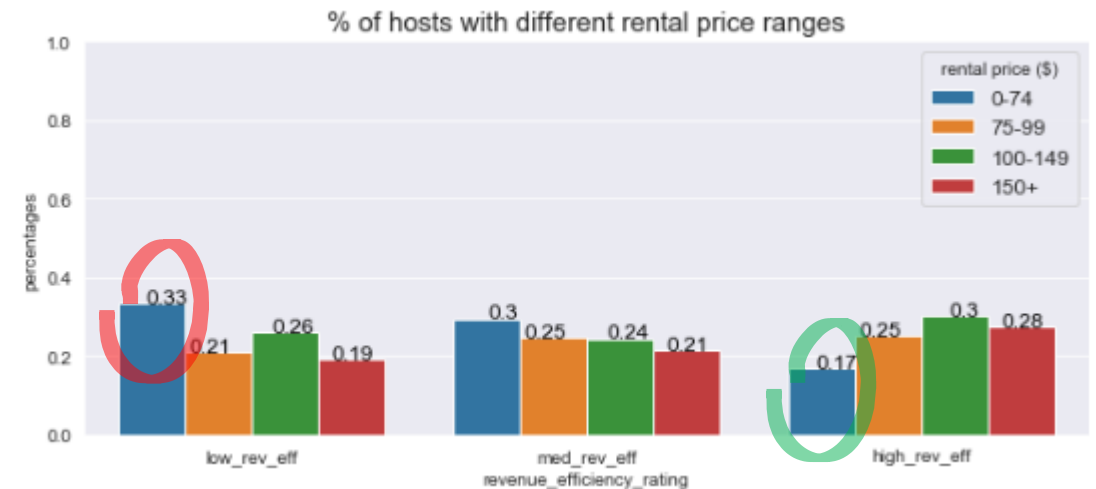


Low Revenue Efficiency hosts are...

**Charging too much for cleaning fees**



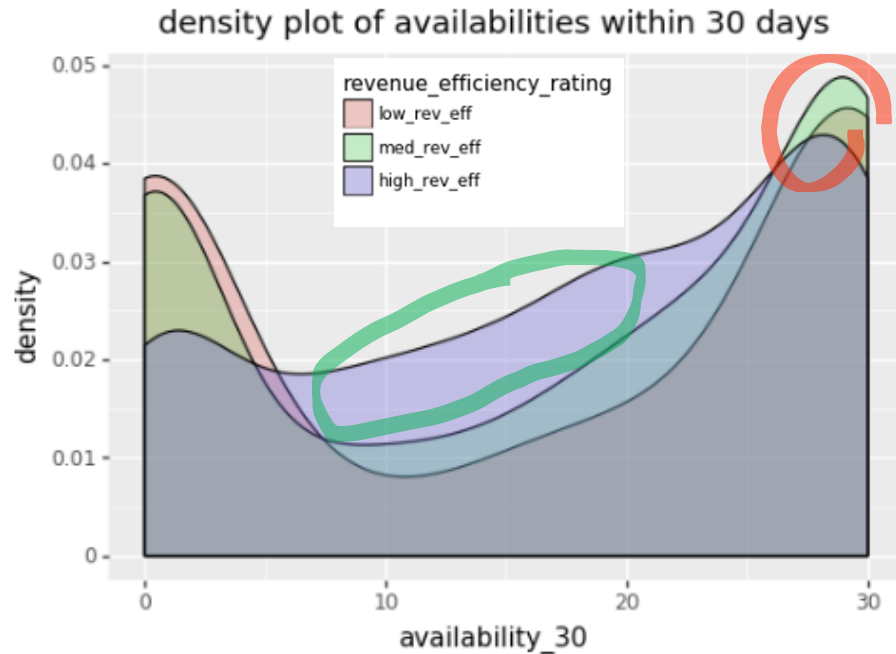
**Too focused on lower end of the price rental scale**



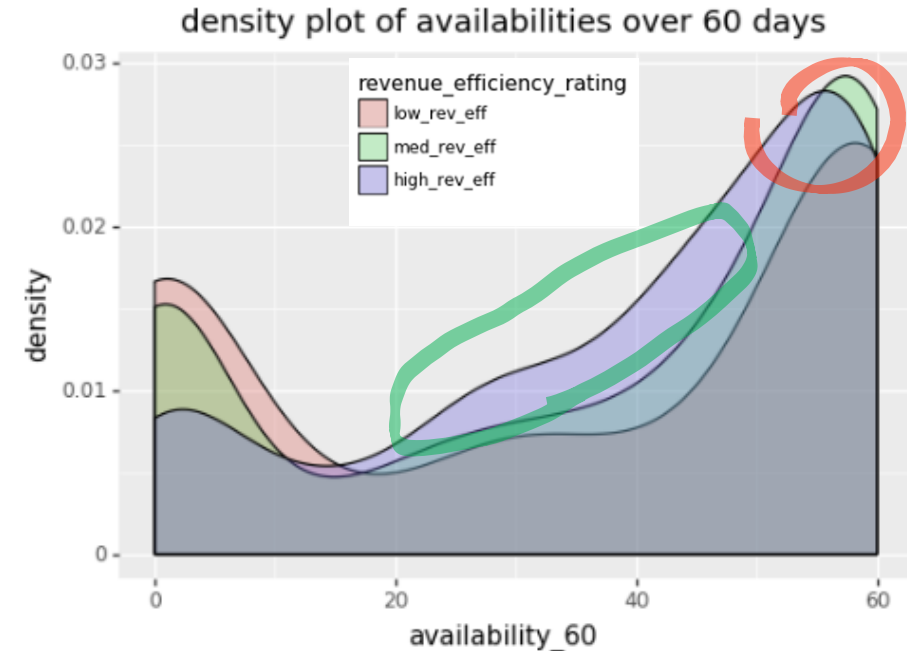
# Being available $\neq$ making more money



**37%** of high revenue efficiency hosts are available only 5-20 out of 30 days



**44%** of high revenue efficiency hosts are available only 25-50 out of 60 days



High Revenue Efficiency hosts are less available than others in each respective time frame, yet **generate more revenue** per month

## Rating type

### 1 Low Revenue Efficiency Hosts

### 2 High Revenue Efficiency Hosts

## Context vs. other hosts

- ✗ **Inefficient rental prices:** huge focus on inexpensive housing (less than \$75/night), but still generating less revenue per month than their counterparts
  - ✗ **(Perceived) deceptive pricing:** intentional or not, cleaning fee levels are high; users view this as a deceptive practice, which likely contributes to decreased rental usage<sup>2</sup>
  - ✗ **Barriers to rental:** stricter cancellation policies; less options to book instantly; higher minimum night requirements to book-- these interrupt the guest experience
- 
- ✓ **No need to always be available:** high revenue efficiency hosts are less available than others but still generate the most revenue
  - ✓ **Balanced pricing:** rental prices and cleaning prices are more moderate than inexpensive/expensive, yet these hosts still generate the highest monthly revenue



# Recommendations to hosts



## Rating type

## Recommendation

**Low Revenue  
Efficiency Hosts**

**Reduce cleaning fee to be more aligned with customer interest:** Airbnb renters are happier with cleaning fees that don't drastically adjust the entire cost of the rental<sup>4</sup>

**Make renting easier for the customer:** Have less strict cancellation policies, make rooms more instantly bookable, don't set as high minimum night requirements

**All hosts**

**Use revenue\_efficiency\_score as another dimension in Smart Pricing:** Users report negatively on their use with Smart pricing, so using revenue\_efficiency\_score and rating could help structure Smart Pricing more effectively

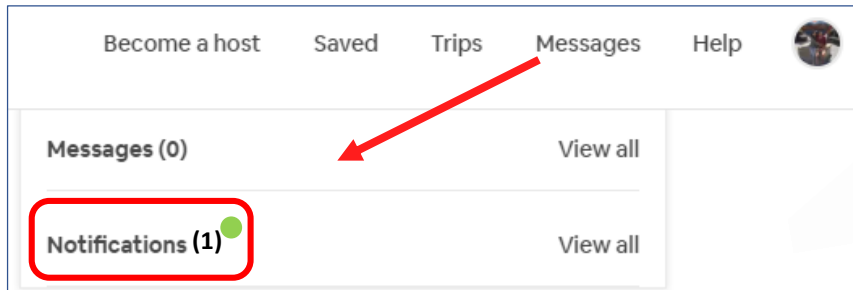
**How and when  
should we make  
these  
recommendations?**

# Suggested Portal for Recommendations



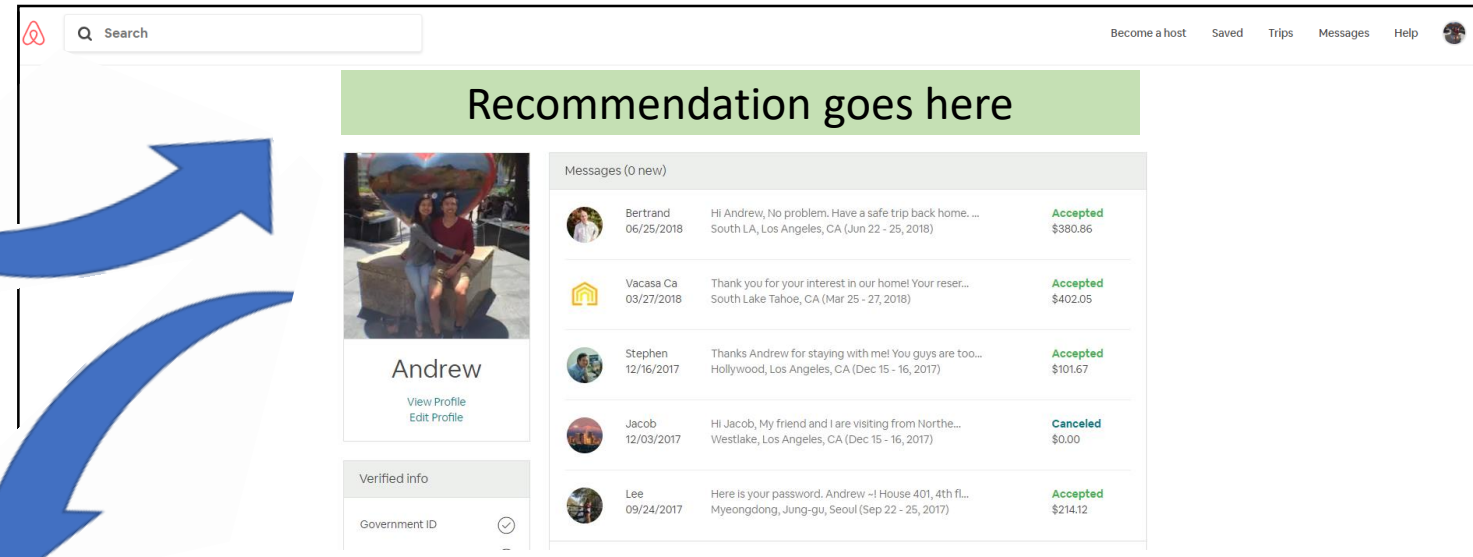
Click on Notifications

1



View suggestions

2



Example suggestions

3

**Guest occupancy lower than you thought?**  
Nearby hosts similar to you recently did better with a moderate cancellation policy. [Try this change for 1 month.](#)

**Looking for more guests?**  
Nearby hosts similar to you typically have a \$40 cleaning fee. [Try reducing your cleaning fee for a month!](#)

Measure click-through rate of the **blue**

# Suggested implementation strategy



		Stakeholder relevance and actions include...	
Stages	Overview	Host success team	Product analytics team
1 Begin measuring	Start measuring <i>revenue_efficiency_score</i> and <i>revenue_efficiency_rating</i>		<b>Action:</b> Can make these measurements easily because they are created from existing metrics
2 Identify Low Revenue Efficiency Hosts	Recommendations will be tested on hosts who have been Low Revenue Efficiency for 6 months	<b>Action:</b> Monitor whether low revenue efficiency hosts require substantial customer service or not	<b>Action:</b> Automate identifying hosts who fit this criteria
3 Calculate & Evaluate	Calculate host metrics (e.g. the features looked at earlier) to see where recommendations can be made		<b>Action:</b> Do calculations to see which metrics could use improvement
4 Make Recommendation & Measure	Select 1 recommendation and provide it to the host; measure response	<b>Action:</b> Survey hosts if they are happy/unhappy with the recommendations	<b>Action:</b> Calculate change in host's key performance metrics before/after recommendations

11

# When should the recommendations be triggered?



## Stage Details

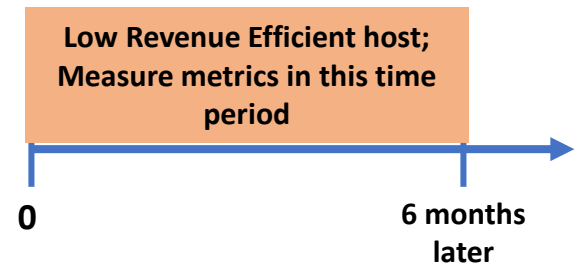
## Approach

2

**Identify Low Revenue Efficiency Hosts**

**Why choose hosts who have been low revenue efficient for 6 months?**

6 months is long enough to display a repeated pattern of low revenue efficiency, but also short enough to where intervention would be appropriate (up to discussion)



3

**Calculate & Evaluate**

If...

**Low Revenue Efficiency Host**

Metrics to measure & Triggers

- Cancellation policy too strict?
- Instantly bookable?
- Minimum nights too high?
- Cleaning fee in top 25 percentile?

Result

**Recommendations**

# I believe these recommendations will increase overall Airbnb host engagement



## Benefits

## Impact

1

### Quick design to implement

- Adding recommendation text to the existing Profile screen is low impact on the user interface, and has a low cost to design that can be quickly implemented<sup>5</sup>

2

### Non-intrusive recommendations

- Recommendations that exist only on the Profile screen are not intrusive to other channels of communication

3

### Convenient user feedback system

- Measuring click-through rate of the blue (see Slide 10) gives us instant feedback on whether the recommendation was helpful

4

### High value to host

- Personalized recommendations show Airbnb's commitment to host success, and recommendations are data-driven and non-conventional

5

### High value to guest/renter

- Hosts that apply the recommendations reduce the barriers to rental, making it a better experience for guests to use Airbnb

Increase host  
engagement & revenue

Increase renter  
satisfaction

Increase host satisfaction

# Metrics of Success & Next Steps



## Measures of Success

### Overall

- Increase in revenue efficiency score
- Increase in monthly bookings for the host

### Specific to recommendations

- Positive feedback from hosts
- Strong usage rate of the recommendations

## Next Steps

- Draft up comprehensive list of triggers
  - (What are we recommending? E.g. *You should change your listing to instantly bookable.*)
- Draft example messages
  - (What exact text will the message have?)

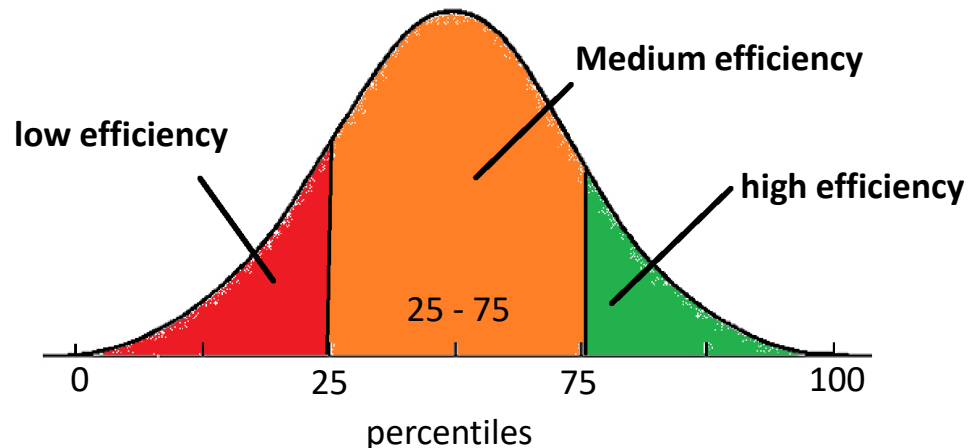
# Appendix



1. I went through 15 features, but found that these 7 features were ones that provided the most information:

- cancellation\_policy
- instant\_bookable
- minimum\_nights
- cleaning\_fee
- price
- availability\_30
- availability\_60

2. If revenue\_efficiency\_score was distributed across a bell curve, here's how I determine the revenue\_efficiency\_rating



3. Cleaning fee and rental fee were also broken up into 4 groups by percentile: 0-25, 25-50, 50-75, and 75-100 percentiles. The data set conveniently pulled host data to match the values shown

4. Guests are not happy with cleaning fees, often seeing certain listing as “deceptive”

<https://community.withairbnb.com/t5/Help/quot-Cleaning-Fees-quot-listed-separately-deceptive-AirBnB/td-p/343486/page/2>

5. Example of recommendation currently available. Feature change recommendations can be put here instead of the referral

