



airbnb

Increasing Host Engagement

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

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 features¹
- 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 groups²:

- 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

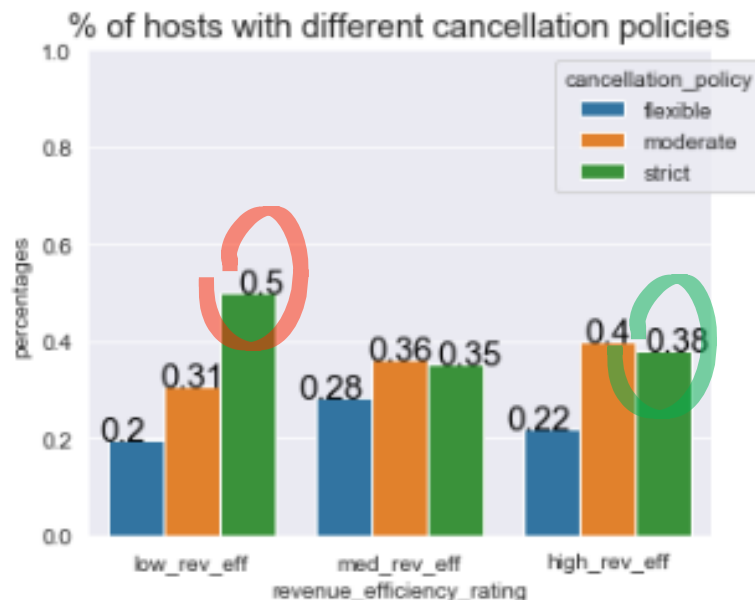
Revenue efficiency score lets us estimate how much revenue per month hosts are making from their listing. **Revenue efficiency rating** lets us rank them in 3 groups.

Low Revenue Efficiency Hosts are tougher to book

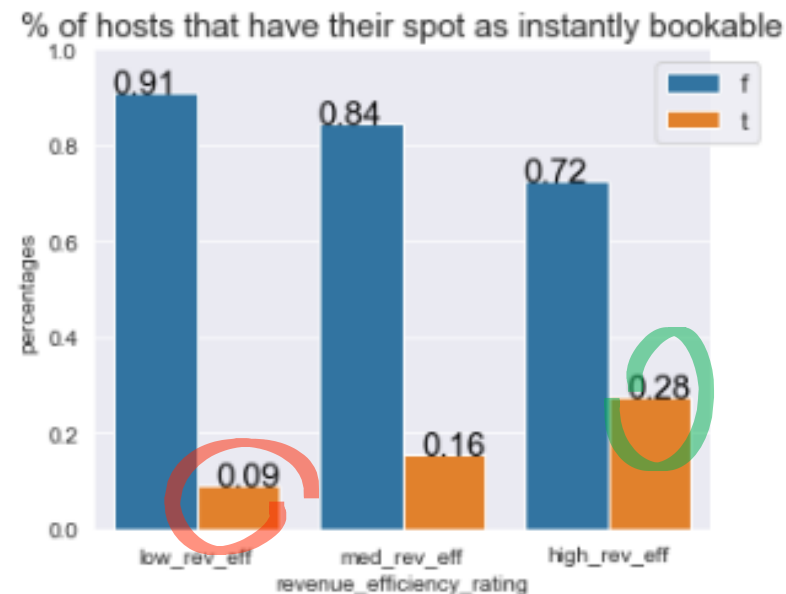


Low Revenue Efficiency hosts are...

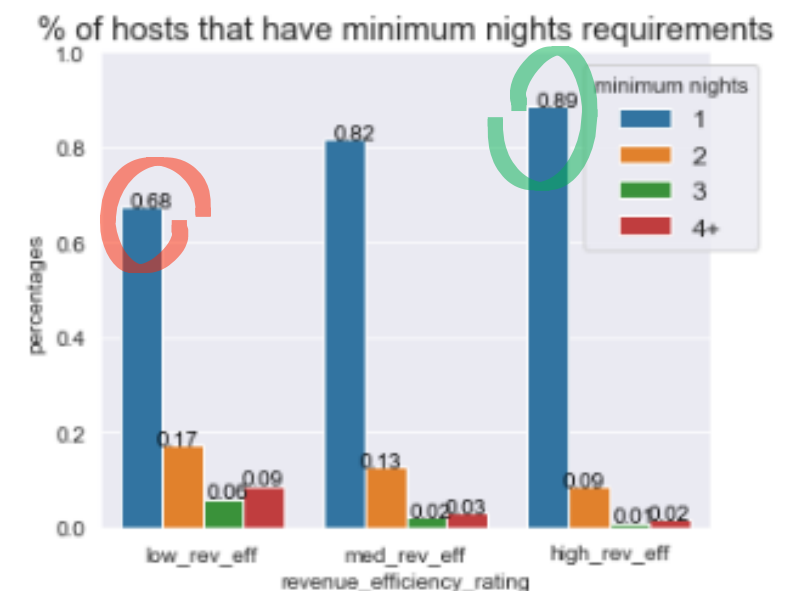
Too strict with their cancellation policies³



Not as likely to give guests the chance to instantly book



Setting cumbersome minimum night requirements

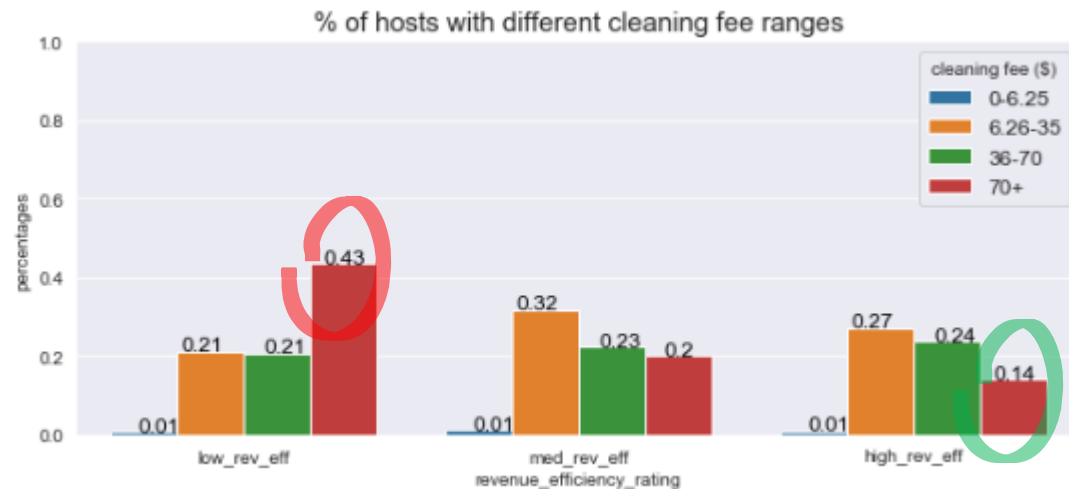


Low Revenue Efficiency hosts could adjust their prices better

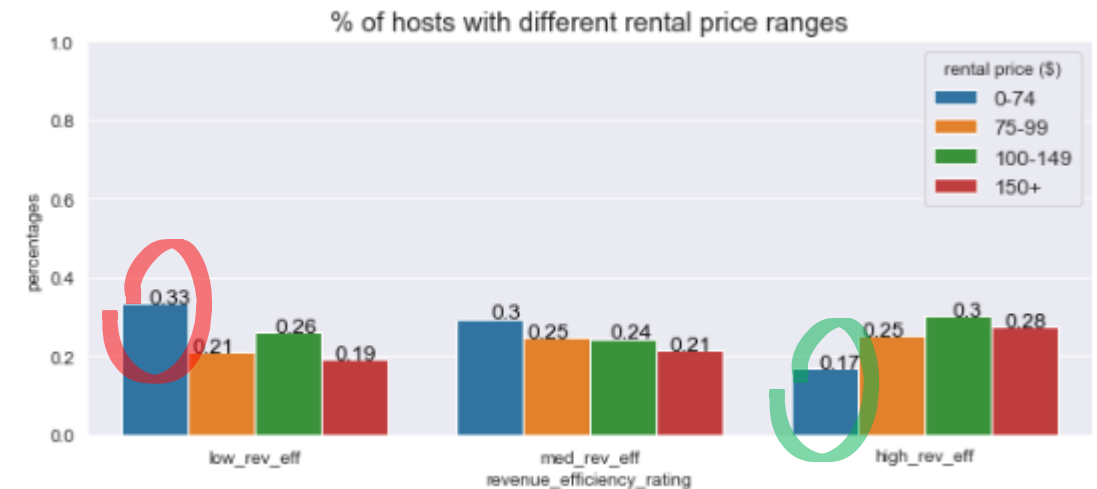


Low Revenue Efficiency hosts are...

Charging too much for cleaning fees



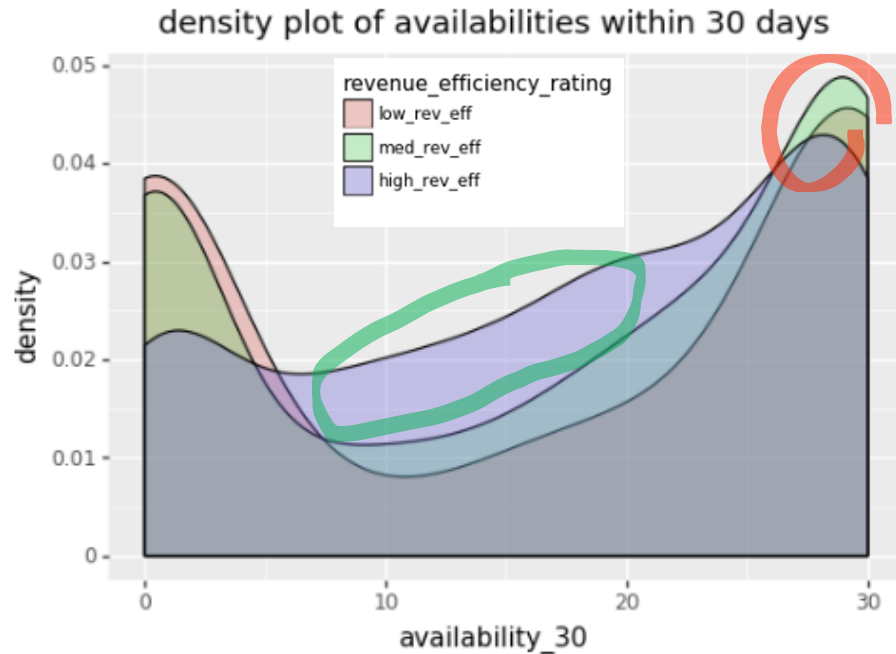
Too focused on lower end of the price rental scale



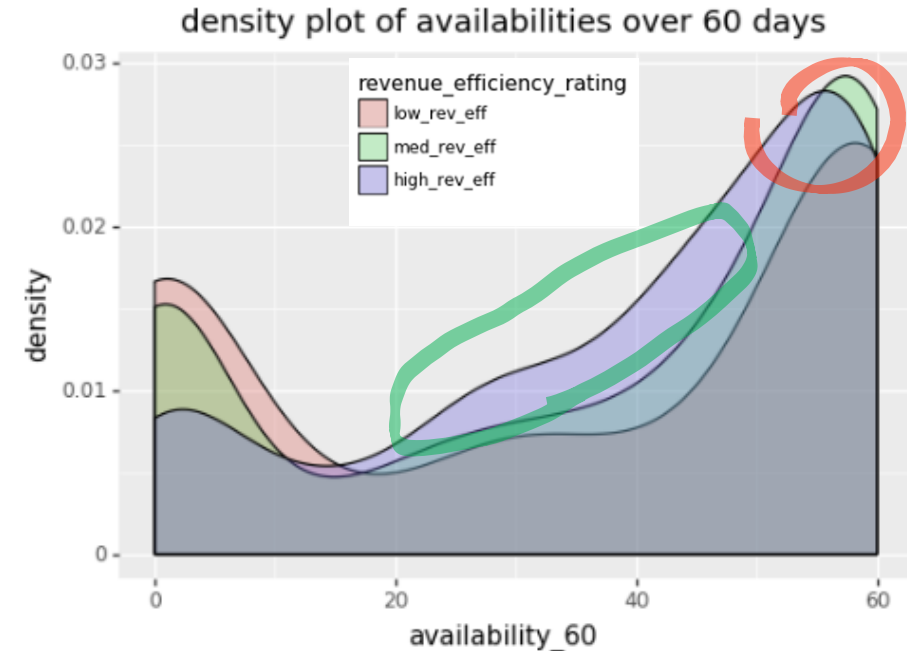
Being available \neq making more money



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 usage²
 - ✗ **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 rental⁴

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

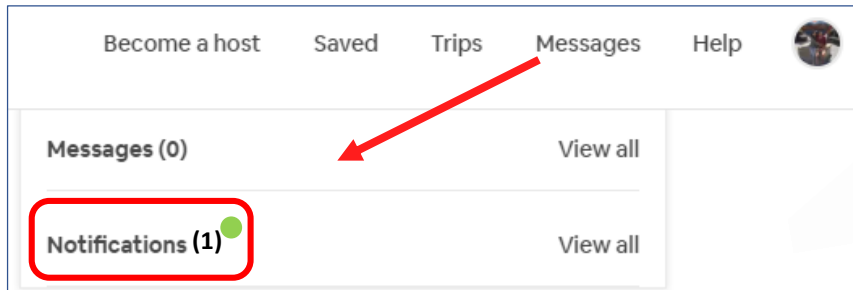
**How and when
should we make
these
recommendations?**

Suggested Portal for Recommendations



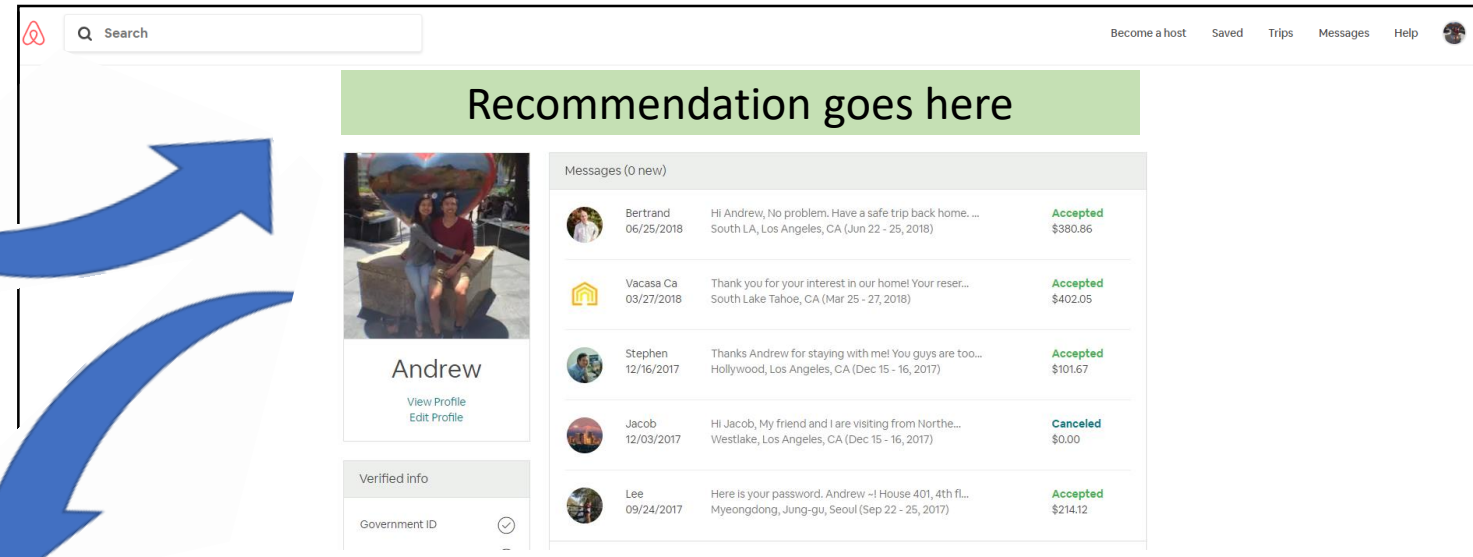
Click on Notifications

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		Host success team	Product analytics team	
1	Begin measuring	Start measuring <i>revenue_efficiency_score</i> and <i>revenue_efficiency_rating</i>		Action: 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	Relevance: Monitor whether low revenue efficiency hosts require substantial customer service or not	Action: 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		Action: Do calculations to see which metrics could use improvement
4	Make Recommendation & Measure	Select 1 recommendation and provide it to the host; measure response	Relevance: Survey hosts if they are happy/unhappy with the recommendations	Action: Calculate change in host's key performance metrics before/after recommendations

When should the recommendations be triggered?



Stage Details

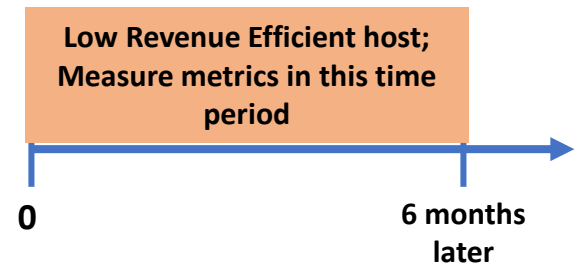
Approach

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 implemented⁵

2

Non-intrusive recommendations

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

3

Streamlined & convenient feedback

- Gives us further insight on whether the recommendation was helpful

4

High value to host

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

5

High value to guest/renter

- These recommendations reduce barriers to rental, making it a better experience for them to 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. *change your listing to instantly bookable.*)
- Draft example messages
 - (What exact text will the message have?)

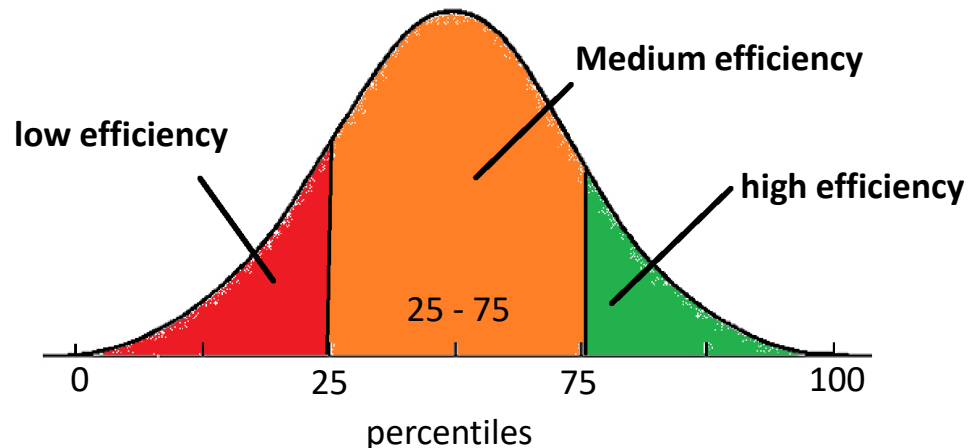
Appendix



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

