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IT INNOVATION

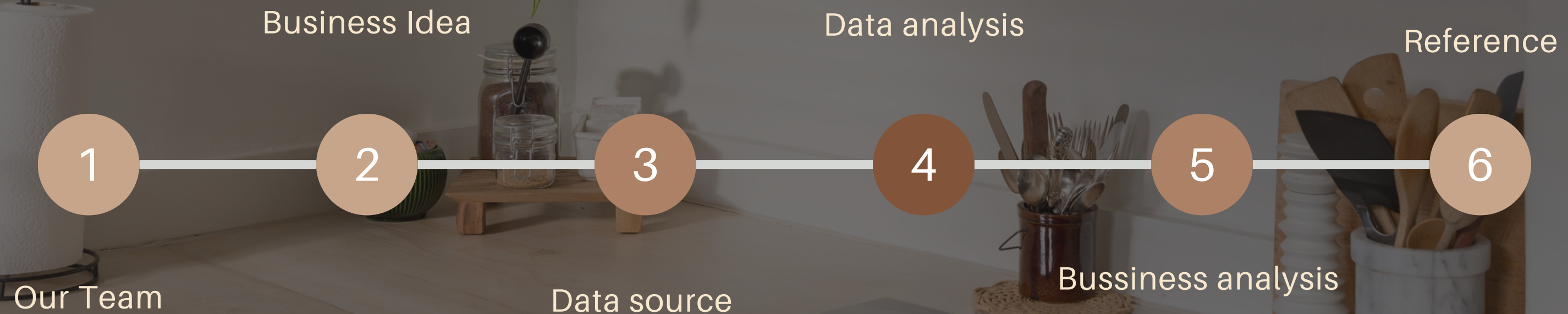
# SUPER HOST ANALYSIS

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# INTRODUCTION

## Presentation Timeline





1

# OUR TEAM



*Hsiang-Yu  
Wang*



*Yu-Hui  
Lin*



*Chu-Yun  
Hsiao*



*Chun-Yi  
Chiang*



2

# BUSINESS IDEA

According to AirDNA, on average Superhosts earn 60% more revenue than standard Airbnb hosts.

## SUPERHOST REQUIREMENTS

10 STAYS IN THE PAST YEAR

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90% RESPONSE RATE IN 24H

---

4.8 OVERALL RATING OR ABOVE

---

1% CANCEL RATE OR BELOW

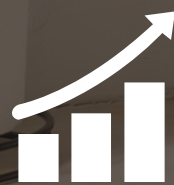


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# BUSINESS IDEA

*How do we increase revenue?*

1



build model

2



choose our target

3

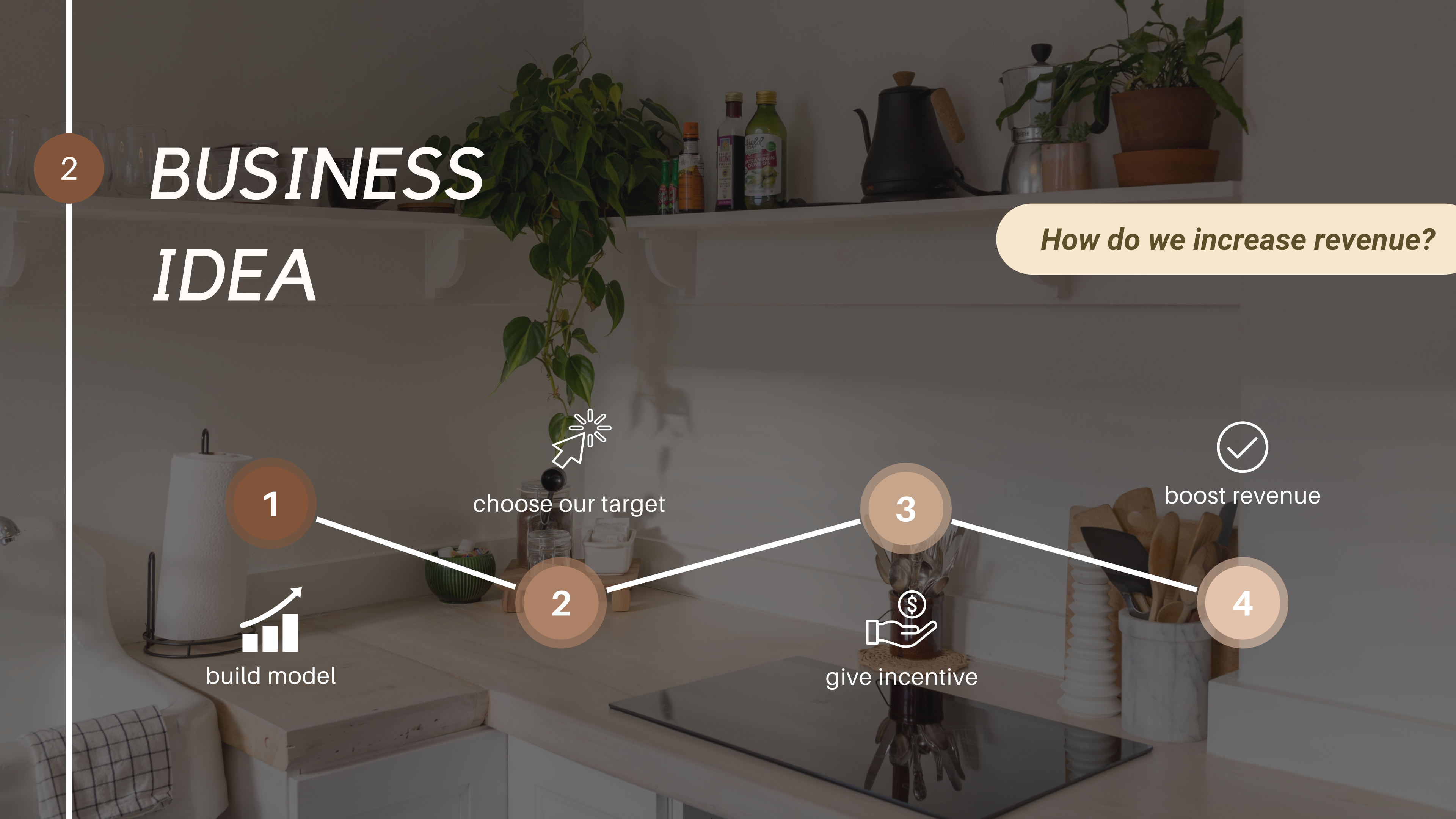


give incentive



boost revenue

4

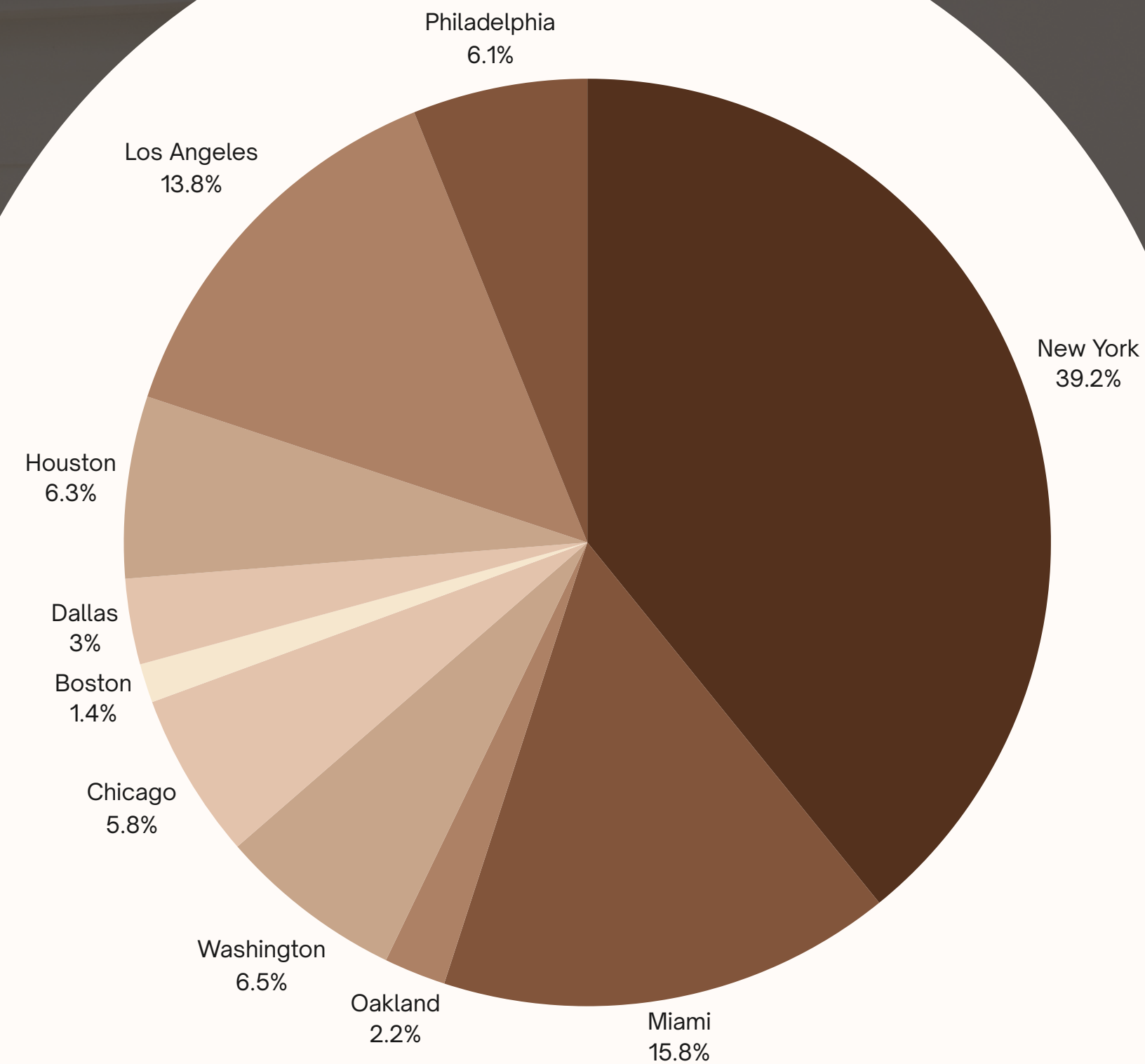




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# DATA SOURCE

from 2020 May to 2020 June, over  
30,000 hosts in total





# DATA ANALYSIS

## TREATMENT EFFECT

Is super host statistically significant for revenue increase?

## SUPER HOST PROBABILITY

predict the probability of each host becoming super host

## REVENUE ANALYSIS

predict revenue growth potential for hosts



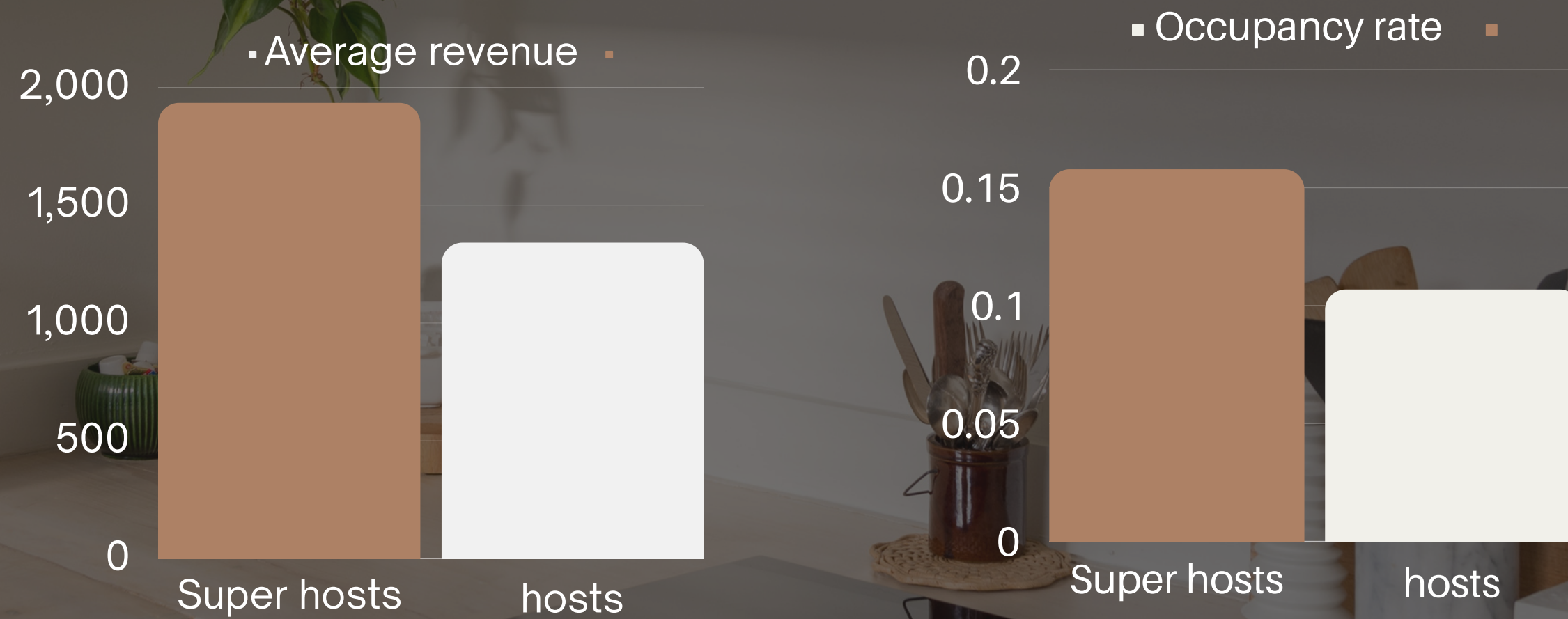
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# DATA ANALYSIS

TREATMENT  
EFFECT

EDA

DID





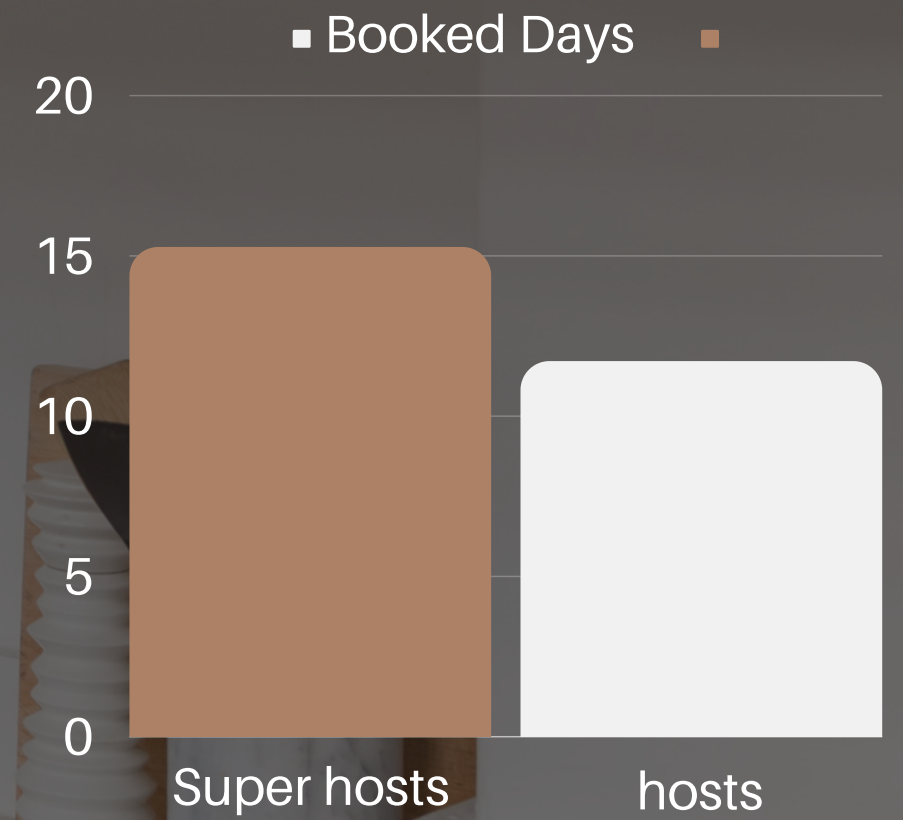
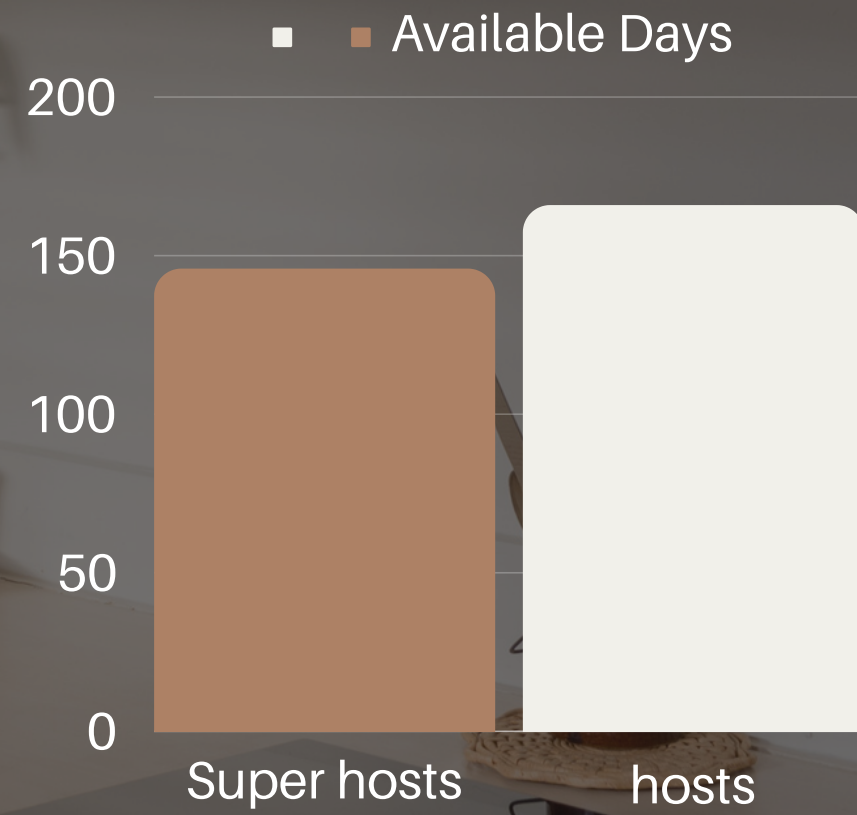
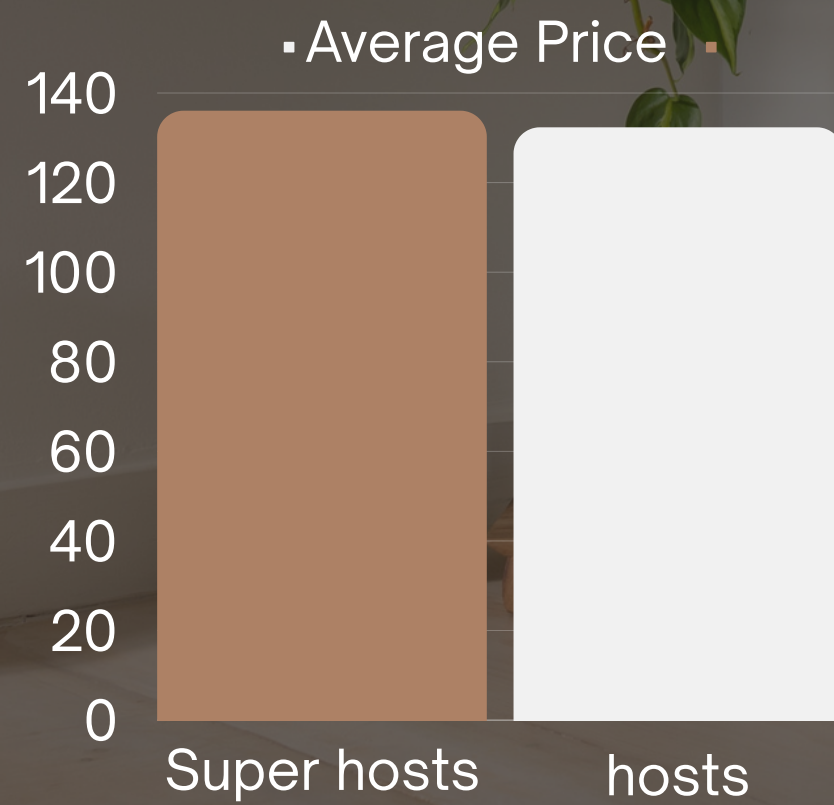
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# DATA ANALYSIS

TREATMENT  
EFFECT

EDA

DID





4

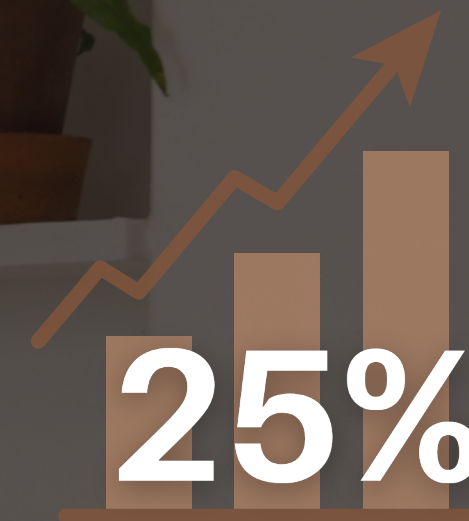
# DATA ANALYSIS

*difference in differences*

**SUPER HOST**

treatment effect is significant under alpha <5%

**25%**



**TREATMENT EFFECT**

**EDA**

**DID**

**BEFORE**

**AFTER**

**0 CONTROL GROUP**

AVG revenue  
**\$1,590**

AVG revenue  
**\$1,449**

**1 TREATMENT GROUP**

AVG revenue  
**\$1,403**

AVG revenue  
**\$1,593**



4

# DATA ANALYSIS

*SUPER HOST  
PROBAIBILITY*

Identify who are  
potential super hosts

VARIABLE  
SELECTION

MODEL  
SELECTION

ODDS  
PREDICTION



4

# DATA ANALYSIS

*SUPER HOST  
PROBAIBILITY*

*VARIABLES*

MODEL

ODDS

10 STAYS IN THE PAST

90% RESPONSE RATE IN 24H

4.8 RATING OR ABOVE

1% CANCEL RATE OR BELOW

- HOSTRESPONSENUMBER\_PASTYEAR
- HOSTRESPONSEAVERAGE\_PASTYEAR
- NUMREVIEWS\_PASTYEAR
- NUM\_5\_STAR\_REV\_PASTYEAR
- PROP\_5\_STARREVIEWS\_PASTYEAR
- RATING\_AVE\_PASTYEAR
- NUMCANCEL\_PASTYEAR



4

# DATA ANALYSIS

SUPER HOST  
PROBAIBILITY

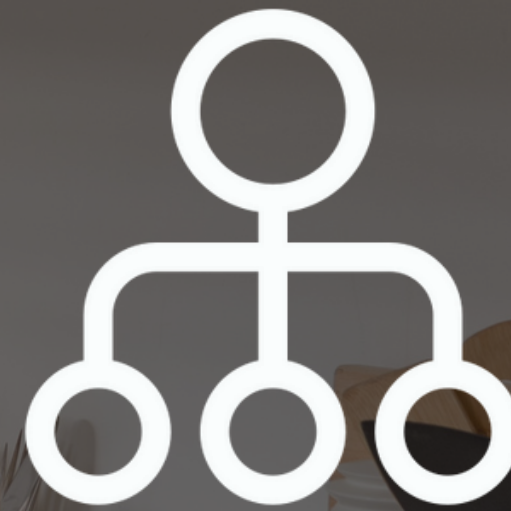
VARIABLES

MODEL

ODDS



LOGISTIC  
REGRESSION



GRADIENT  
BOOSTING



4

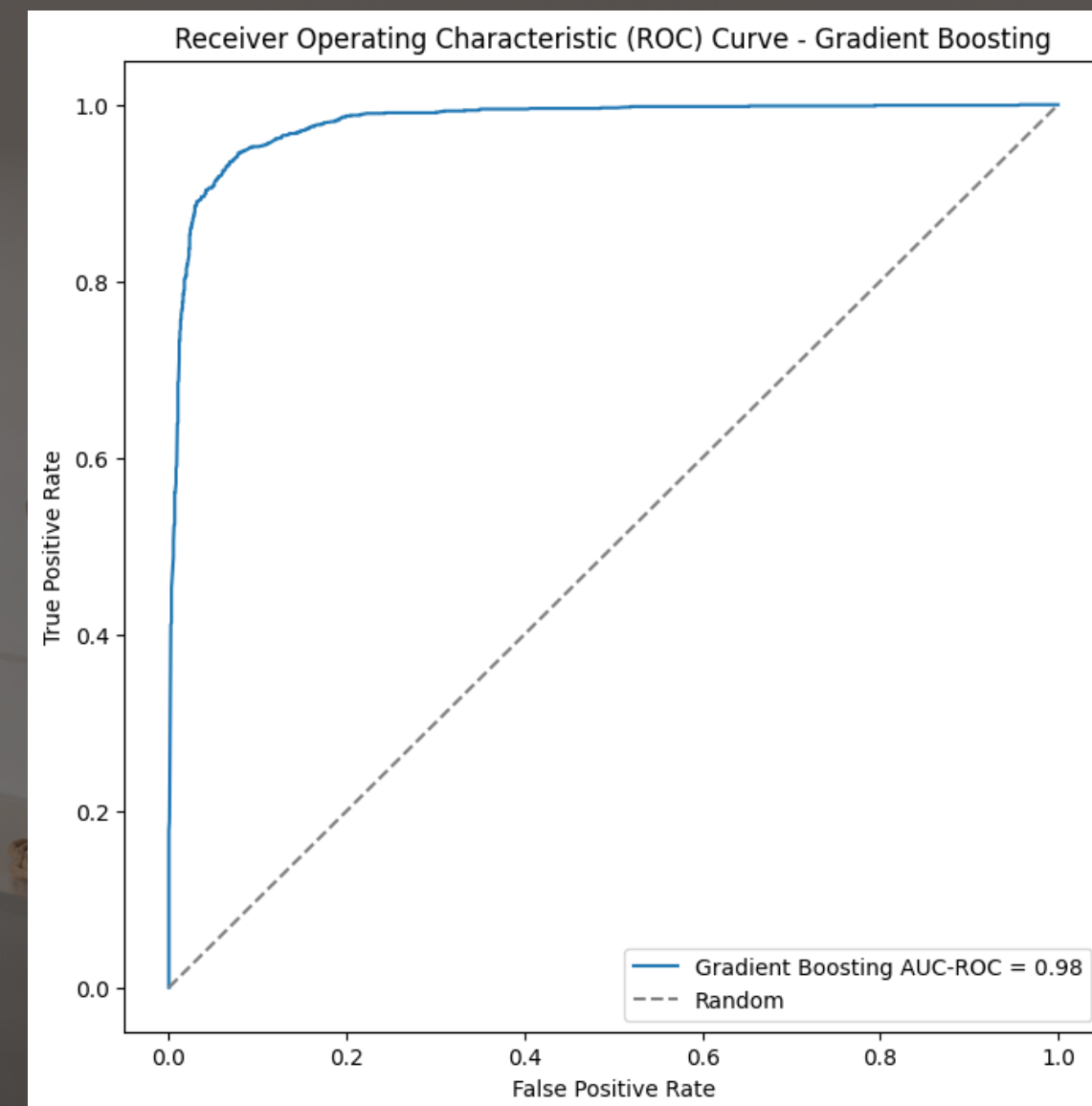
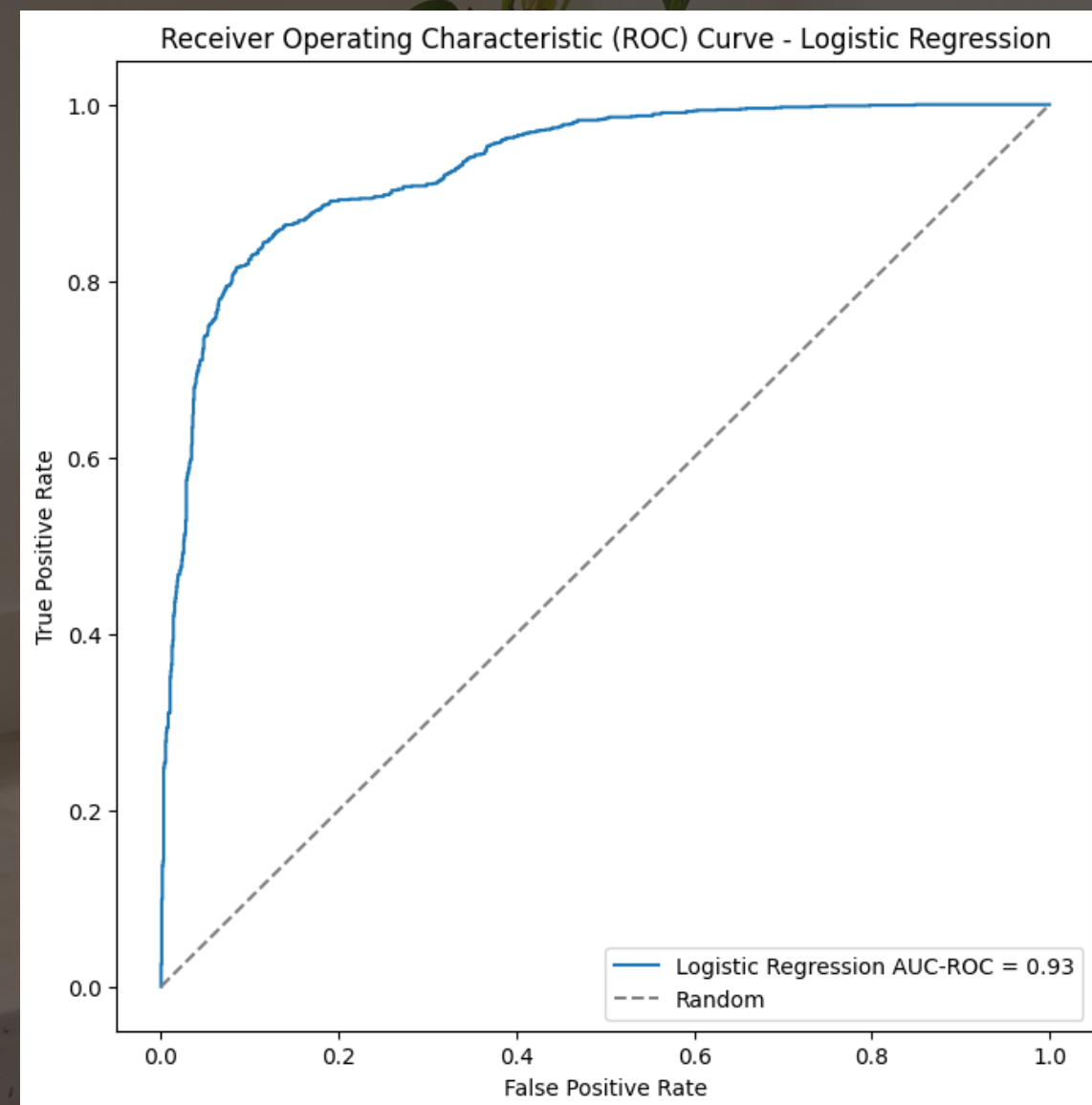
# DATA ANALYSIS

*SUPER HOST  
PROBAIBILITY*

VARIABLES

MODEL

ODDS





4

# DATA ANALYSIS

*SUPER HOST  
PROBAIBILITY*

VARIABLES

MODEL

ODDS

Potential super hosts

> 50%

histogram of predicted probability



*1221* Hosts



4

# DATA ANALYSIS

REVENUE  
ANALYSIS

predict potential revenue growth  
for hosts

VARIABLE  
SELECTION

MODEL  
SELECTION

REVENUE  
PREDICTION



4

# DATA ANALYSIS



**REVENUE  
ANALYSIS**

**VARIABLES**

**MODEL**

**PREDICT**

**category 1**  
super host

**category 2**  
booking status

**category 3**  
housing

**category 4**  
location

**category 5**  
demographic



4

# DATA ANALYSIS

REVENUE  
ANALYSIS

VARIABLES

MODEL

PREDICT



BACKWARD  
SELECTION



4

# DATA ANALYSIS

**+11.6%**  
(\$722)

■ hosts ■ superhosts



REVENUE  
ANALYSIS

VARIABLES

MODEL

PREDICT



5

# *BUSINESS ANALYSIS*

## **Target Host**

find out the potential  
super hosts

***INCENTIVE***

## **Super host**

expand super host base  
to drive revenue growth



# REFERENCE



## How to Become Airbnb Superhost: Meaning, Tips, Requirements

Airbnb launched its Superhost program back in 2016, but do you know what it is, or how to attain this coveted status? Read more at the AirDNA blog.

 [airdna.co](https://airdna.co)



## Airbnb Superhost: Requirements, Benefits, and Tips

What is an Airbnb Superhost and how do you become one? In this blog we'll tell you all the whats, whys and hows of Airbnb Superhost status.

 Little Hotelier / Oct 10, 2022





***THANK YOU***