



Smart Billboards & Posters

Inspire Wanderlust with Data Driven Customized Ads

By Cassandra Hoo



Advances in smart technology, IoT, and how we gather data have changed the advertising landscape.





Investing in travel can be inspired by so many factors, like ticket prices, time of year, wanting to escape to a different climate, and celebration.



Discover how Airbnb can bring out the adventurer in anyone with targeted smart billboards that utilize IoT and Big Data!





Existing Technology



Smart billboards can integrate with facial recognition and biometric cameras that can detect age, gender, size of crowd, and so much more!



["Individually Targeted Billboard Ads"](#)



Example #1



Lexus used cameras in Australia to identify the color and make of a car to provide personalized messages to drivers as they passed by.

[“LOOK Lexus uses “smart” billboards to talk to motorists”](#)



Example #2

The German beer company, Astra, used cameras to detect women. The ad would only play if a woman walked by.



["Women-Only Beer Advertising : Recognition Billboard."](#)



Smart billboards can also change their messaging based on geolocation, the weather/temperature, and well... pretty much anything!

[“Temperature Sensitive Billboards”](#)





Example #1



Netflix created 100 different GIF ads that changed based on the weather, local news, and events in a given location.

[“Responsive GIF Ads: ‘Movie Poster Ad.’”](#)



Example #2

The company, Mark's, increased their discounts whenever the it got colder outside.



[“Climatic Sale Ads”](#)



The Strategy

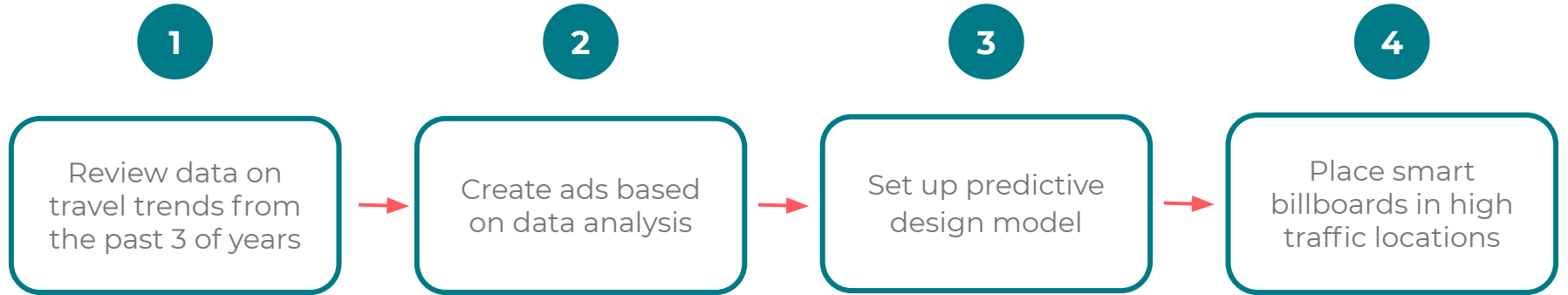


Airbnb will target potential customers with smart billboards that pertain to their current conditions to increase the likelihood of booking a vacation.





Overview of the Process



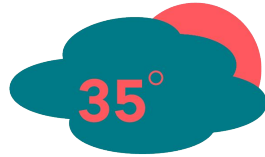


Ad Creation

Similar to Netflix's gif campaign (see page 10), Airbnb will create 100's of ads based on pre-existing data from the following areas:



Geolocation



Weather



Travel Trends



Predictive Design and IoT Overview

The ads that end up showing on the billboards will be based on:



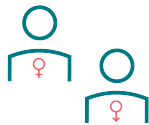
Geolocation: Major traffic hubs, like Times Square, the Hollywood Bowl, or popular transportation stops.



Travel Deals: Real-time ticket discounts and price drops for destinations sold on travel and airline websites.



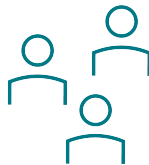
Weather: Current temperature and weather conditions, forecast, and the upcoming season.



Gender: Real-time biometric data captured from face recognition cameras that can detect the largest percentage of a particular gender within a crowd.



Travel Trends: Future holidays, popular vacation times of the year, sought-after destinations, and celebrations.



Crowd Size & Type: Real-time population density/size and group cluster (i.e. couples holding hands, families, etc.) data in a given location captured by cameras.



Data Model

Billboard Inputs

- Geolocation
- Crowd size & type
- Gender majority in crowd
- Time & date
- Current weather & temperature

+

Database Inputs

- Upcoming weather forecast
- In-demand travel times & holidays
- Travel destination trends
- Current travel deals

=

Predictive Ad Outputs

- Favorable weather destinations
- Romantic hideaways
- Family oriented vacations
- Friend getaways
- Popular places to visit
- Great deals
- Staycations
- Location-centric vacation jokes



Pilot Smart Billboard Campaign in Major Cities

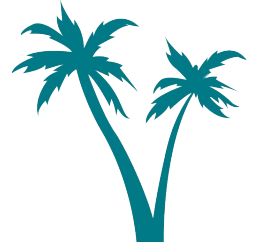
Airbnb will place smart billboard ads in heavily foot trafficked areas in:



NYC



San Francisco



Los Angeles



Examples of Potential Smart Billboard Ad Outputs



Romantic Destination

BILLBOARD INPUT

Geolocation: Los Angeles - Near the Hollywood Bowl

Date & Time: Friday evening in May; an hour before a show at the Bowl

Current Weather: 80 degrees and clear skies

Crowd Size & Type: Densely populated; lots of families and couples

Gender Majority: 50/50 split

DATABASE INPUTS

Upcoming Weather Forecast: Sunny and in the 70's and 80's

In-Demand Travel Times: July and August

Travel Trends: Popular yoga destinations, exotic locations, quick trips

Travel Deals: Ticket drop on round trip tickets to Bali

Embark on a romantic getaway to Bali.





Girl's Trip

BILLBOARD INPUT

Geolocation: San Francisco - Near UC Berkeley's Campus

Date & Time: Saturday afternoon in February

Current Weather: 70 degrees and rainy

Crowd Size & Type: Scattered groups of students

Gender Majority: 70% female, 30% male

DATABASE INPUTS

Upcoming Weather Forecast: Next weekend is 75 degrees and sunny

In-Demand Travel Times: Spring break in March

Travel Trends: Weekend getaways, staycations, Asia, and Europe

Travel Deals: Wine tasting tours on Groupon

Have an epic girls' trip in Sonoma, CA.





Staycation

BILLBOARD INPUT

Geolocation: New York City, Times Square

Date & Time: Friday night in September

Current Weather: 105 degrees

Crowd Size & Type: Densely crowded with all walks of life

Gender Majority: 45% female, 55% male

DATABASE INPUTS

Upcoming Weather Forecast: Heatwave all weekend

In-Demand Travel Times: Jewish holidays in Oct. and winter holidays

Travel Trends: Europe, Asia, and staycations

Travel Deals: 10% off on next Airbnb stay

No air conditioner? Staycation
in a place that does.





4 Day Getaway

BILLBOARD INPUT

Geolocation: Los Angeles, Downtown LA Arts District

Date & Time: Friday night in June

Current Weather: 70 degrees

Crowd Size & Type: Medium density with couples and groups

Gender Majority: 50/50 split

DATABASE INPUTS

Upcoming Weather Forecast: June gloom

In-Demand Travel Times: All summer

Travel Trends: Popular yoga destinations, exotic locations, quick trips

Travel Deals: \$99 round trip tickets to Mexico City

**BBQ with a view. This is how
Mexico City does carne asada.**

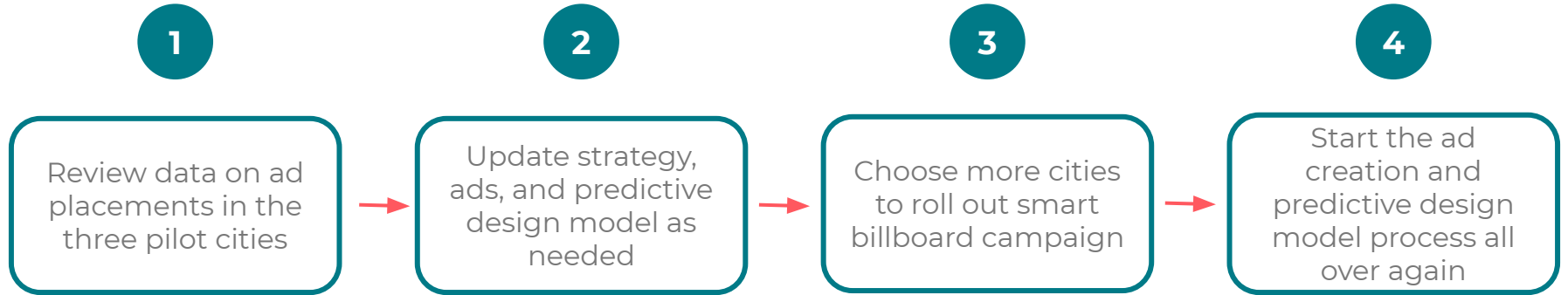




Recommended Next Steps



Expansion Goals





Thank you :)



Sources

1. “Climatic Sale Ads: ‘Interactive Advertisements.’” *TrendHunter.Com*, <https://www.trendhunter.com/trends/interactive-advertisements>. Accessed 14 July 2019.
2. “Individually Targeted Billboard Ads: Picadilly Lights.” *TrendHunter.Com*, <https://www.trendhunter.com/trends/picadilly-lights>. Accessed 13 July 2019.
3. “Responsive GIF Ads: ‘Movie Poster Ad.’” *TrendHunter.Com*, <https://www.trendhunter.com/trends/movie-poster-ad>. Accessed 14 July 2019.
4. “Temperature-Sensitive Billboards: Coca-Cola Billboard.” *TrendHunter.Com*, <https://www.trendhunter.com/trends/cocacola-billboard>. Accessed 12 July 2019.
5. “Women-Only Beer Advertising: Recognition Billboard.” *TrendHunter.Com*, <https://www.trendhunter.com/trends/recognition-billboard>. Accessed 14 July 2019.
6. Writer, Staff. “LOOK Lexus Uses ‘Smart’ Billboards to Talk to Motorists.” *Marketing Interactive*, 19 Jan. 2015, <https://www.marketing-interactive.com/australias-smartest-billboards-talk-motorists-lexus/>.



Airbnb Photo Sources

Title Pages:

1. Page 2: <https://www.airbnb.com/rooms/29011850>
2. Page 3: <https://www.airbnb.com/rooms/20151984>
3. Page 4: <https://www.airbnb.com/rooms/31951202>
4. Page 12: <https://www.airbnb.com/rooms/16195307>

Ads:

1. Romantic Getaway Ad: <https://www.airbnb.com/rooms/611590>
2. Girl's Trip Ad: <https://www.airbnb.com/rooms/4750736>
3. Staycation Ad: <https://www.airbnb.com/rooms/35481836>
4. 4-Day Getaway:: <https://www.airbnb.com/rooms/18472952>



Icon Sources

1. Empire State Building by Laura Lin from the Noun Project:
<https://thenounproject.com/search/?q=New%20York%20City&i=1367666>
2. Los Angeles by Olena Panasovska from the Noun Project:
<https://thenounproject.com/search/?q=LA&i=2678011>
3. Golden Gate Bridge by Anniken & Andreas from the Noun Project:
<https://thenounproject.com/search/?q=san%20fransisco&i=1056500>
4. Palm Tree by Vectors Market from the Noun Project:
<https://thenounproject.com/search/?q=Palm%20Trees&i=1987525>
5. Plane by Guilherme Furtado from the Noun Project:
<https://thenounproject.com/search/?q=Plane&i=2797956>