

Low engagement?

Exploring the use of AI to enhance survey experience

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The Human-Computer Interaction

- Artificial Intelligence
- Machine Learning
- Virtual Reality
- Augmented Reality
- Computer Vision
- Voice Recognition
- ...



LIFE
WAS
MUCH
EASIER
WHEN
APPLE
WAS 
JUST A
FRUIT



Image Recognition

The image recognition market is estimated to grow from USD 16 Bn (2016) to USD 39 Bn by 2021

Source: Markets and Markets- Global Forecast to 2021

- eCommerce
- Video Gaming
- Automotive
- Trends Detection

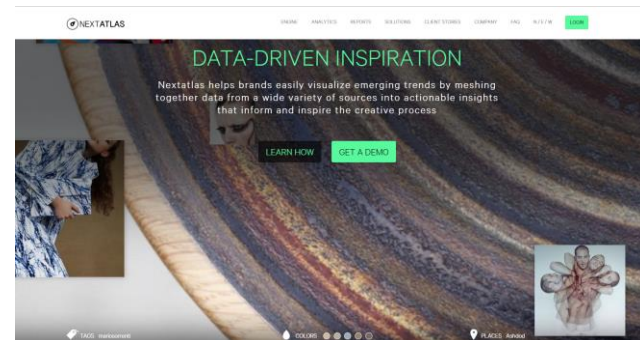
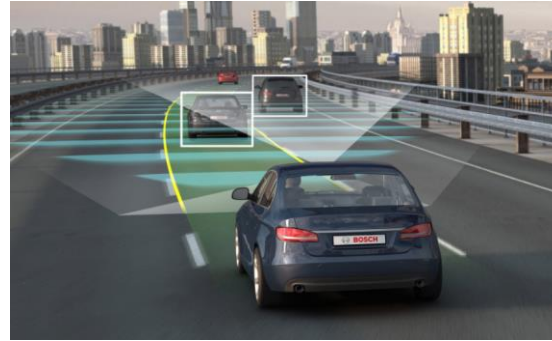
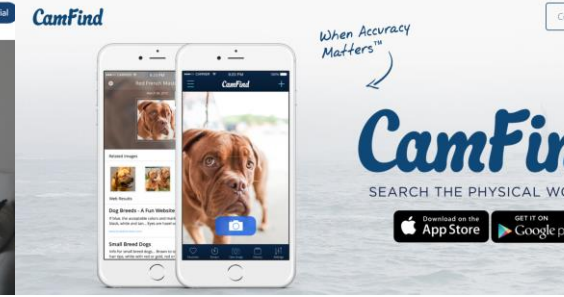
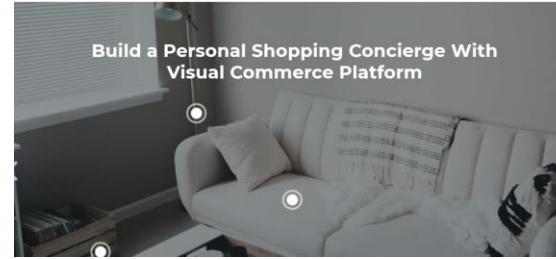


VISENZE

Solutions Case Studies Technology Demo

Free Trial

CamFind



Voice recognition: Some estimations

- “33 million voice-first devices in circulation”
(VoiceLabs. 2017)
- “50% of all searches will be voice searches by 2020”
(Comscore)
- “By 2019, the voice recognition market Will be a \$601 million industry”
(Technavio)



The Digital Assistant: The Platforms New Battle

amazon

amazon alexa



Google Home



SAMSUNG



Bixby



Sundar Pichai, CEO Google

Mashable

The call actually goes a bit differently than expected.

Voice Recognition: A new opportunity for Brands

ADWEEK

EMERGING TECH

As Voice Has Its Moment, Amazon, Google and Apple Are Giving Brands a Way Into the Conversation

Few of their devices' skills or apps are branded, but that's changing

By Dan Tynan | October 9, 2017



MIT Technology Review

Business Impact

Why 500 Million People in China Are Talking to This AI

iFlytek's voice recognition technology is everywhere in China, and that's what's making it smarter every day.

A screenshot of the Hyundai Blue Link mobile app. The app has a blue header with the "Blue Link" logo and "myHYUNDAI". Below the header, it says "2018 SONATA". The main screen features a grid of circular icons for various car functions: Lock, Unlock, Remote Start, Stop, Locks, Unlock, Voice, and Car Data. At the bottom, there are icons for Home and Map. The background of the app interface is a light blue gradient.

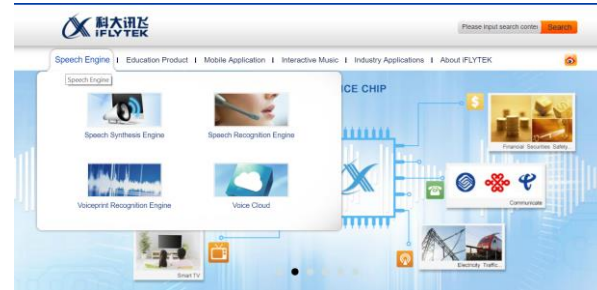
Convenience that's priceless, and free too.

Hyundai Blue Link® Connected Car Service complimentary for 3 years*

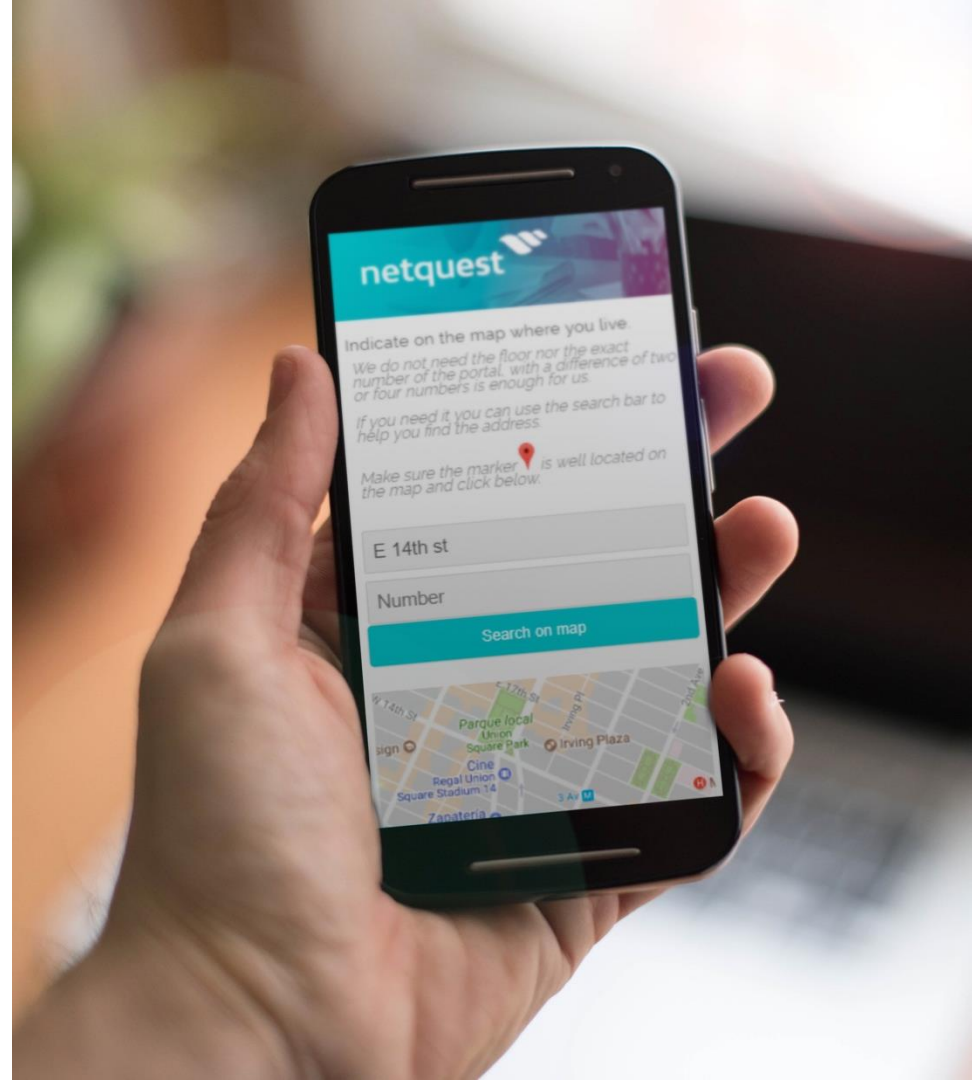
Enjoy remote engine start with climate control, in-car maintenance scheduling and more.

'Alexa, order me a cocktail': Diageo and Dentsu Aegis test voice activation in the connected bar

By Katie Deighton - 23 June 2017 11:15am



How do Market Researchers Approach these Technology Opportunities?



The Respondents Engagement challenge

Telephone surveys

(Pew Research Center)

- 1997: 36%
- 2012: 9%

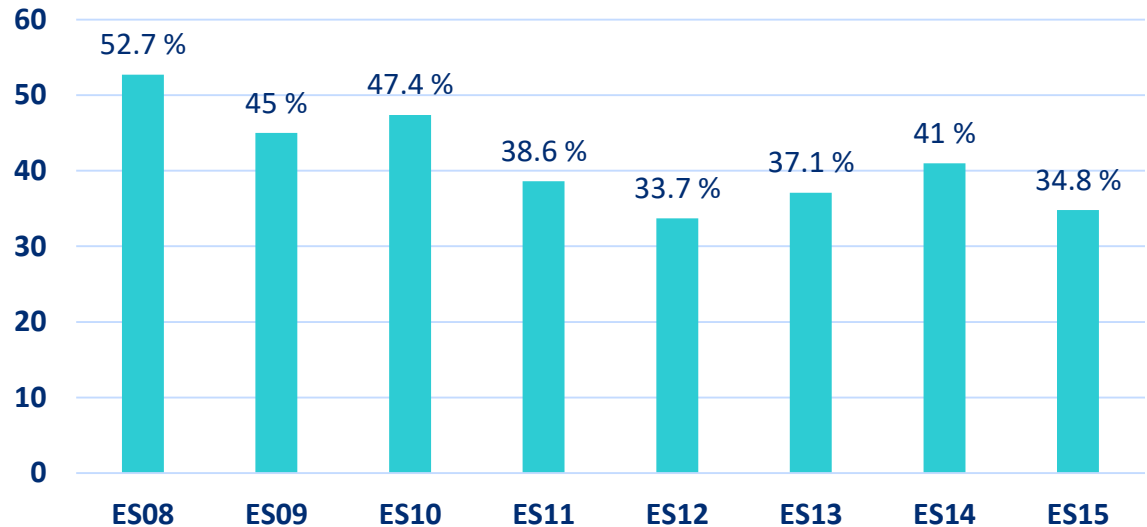
Online Surveys

Baiely et al (2015)

- 2014-2009 (-50%)

Average Response Rate % of 10 first survey participants

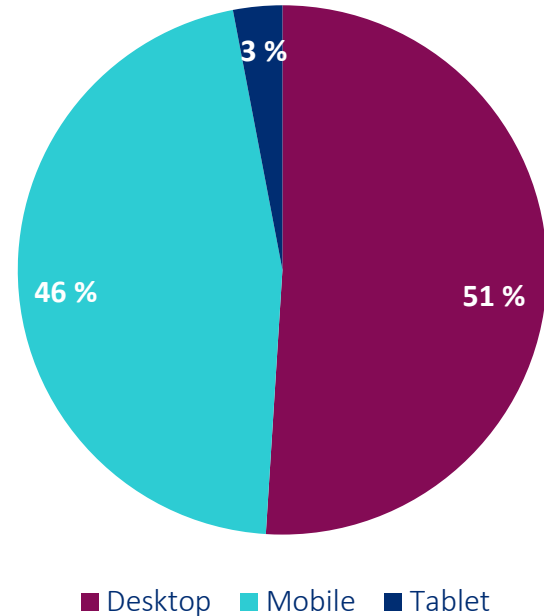
Netquest Spain



Background - Opportunities

- According to Statista (2017), mobile internet traffic as a share of total global online traffic is of a 53%.
- 46% of Netquest Surveys are being answered from mobile devices (mobile + tablet).

Total % Netquest



Engaging New AI Technologies for Survey Data Collection



How to adapt surveys to the new era

- Improving engagement via adapting the surveys for mobile devices.
- Exploring the use of voice and images for answering surveys.
- Adopting Artificial Intelligence tools.

Goal

To advise researchers about the advantages and limits of these tools to facilitate innovative response formats.



Our Study

Test Google APIs (Google Vision & Google Cloud Speech)

- How precise are the generated tags for images?
- How good is the API converting audio to text?
- Are responses longer when using Voice Input?



Images

Recognition Study



Sampling

- Millennials (age 16 to 34)
- Who have a smartphone and use Internet more than once a week
- In Spain and Mexico

Data collection



2nd – 19th June, 2017

Quotas

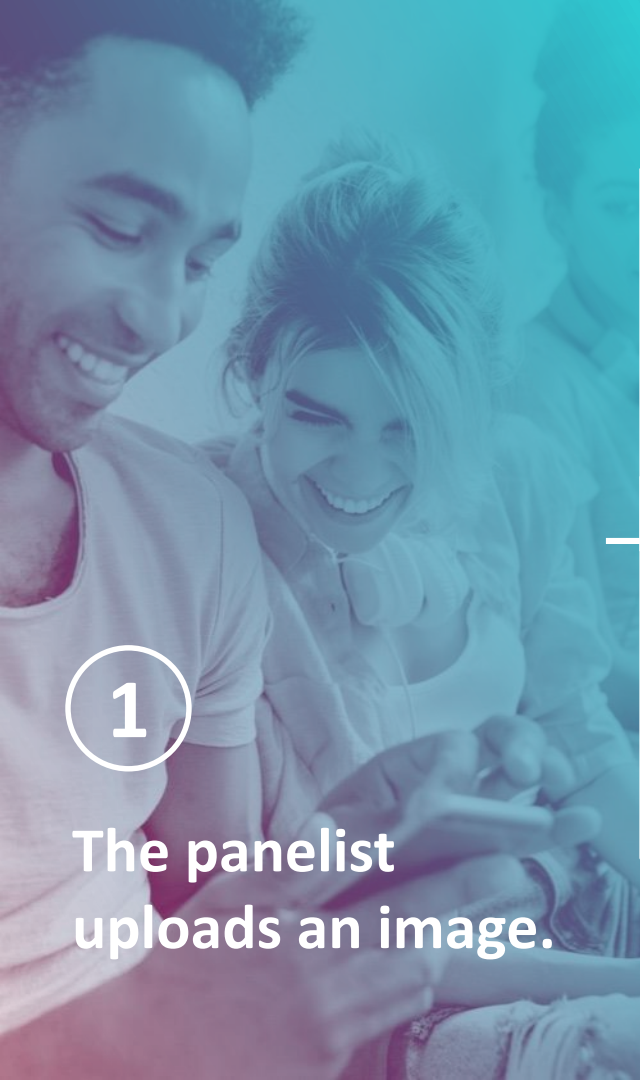
Cross quotas for country, age and gender, based on the general Internet population.

Final sample for analysis

1,614 respondents who completed the survey until the end:

- Spain: **808**
- Mexico: **806**





1

The panelist
uploads an image.

2a

The Human Coder
interprets the image and
writes down the tags.

OR

2b

Google Vision
generates the tags
automatically.

3

The image is
codified with tags.

Nature

Mountain

Beard

Hiking

Voice

Recognition Study



Sampling

- All the individuals older than 16 years old who have regular Internet access through a smartphone.

Data collection



Between the 25th of January and the 19th of February 2018.

Quotas

Cross quotas for age, gender and educational level were used.

Final sample for analysis

1,205 respondents completed the survey until the end:

- Android: **609**
- IOS: **594**

which corresponds a 94% of those who answered the first main survey question.





iOS



Voice
Recording



Text



Android



Voice
Recording



API Google
Cloud Speech



Text



Main Results



Main results: Images

64.99%

Rate of similarities between
Google Vision API and Human Coder



Sometimes the results were similar



Dog

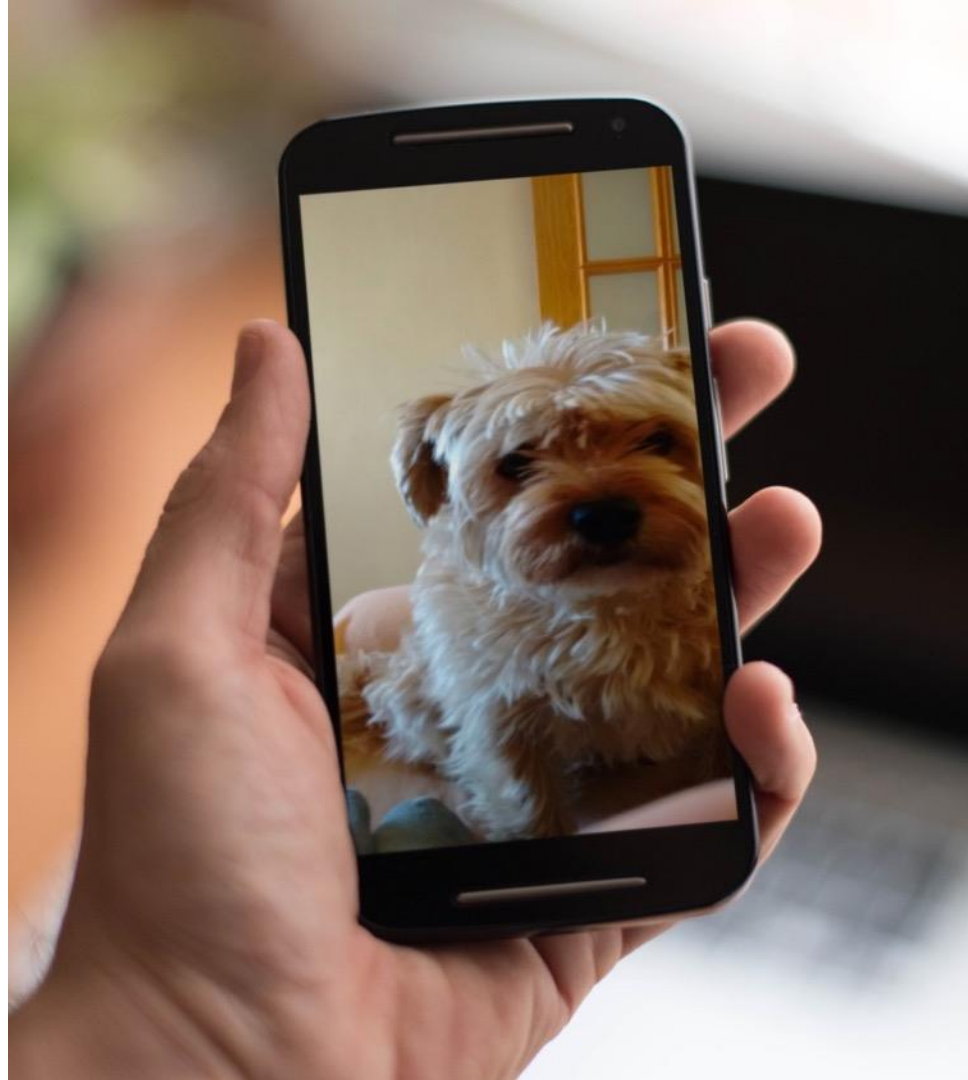


Dog

Dog like mammal

Dog breed group

Morkie



Sometimes they were not so similar



Keyboard

Screen

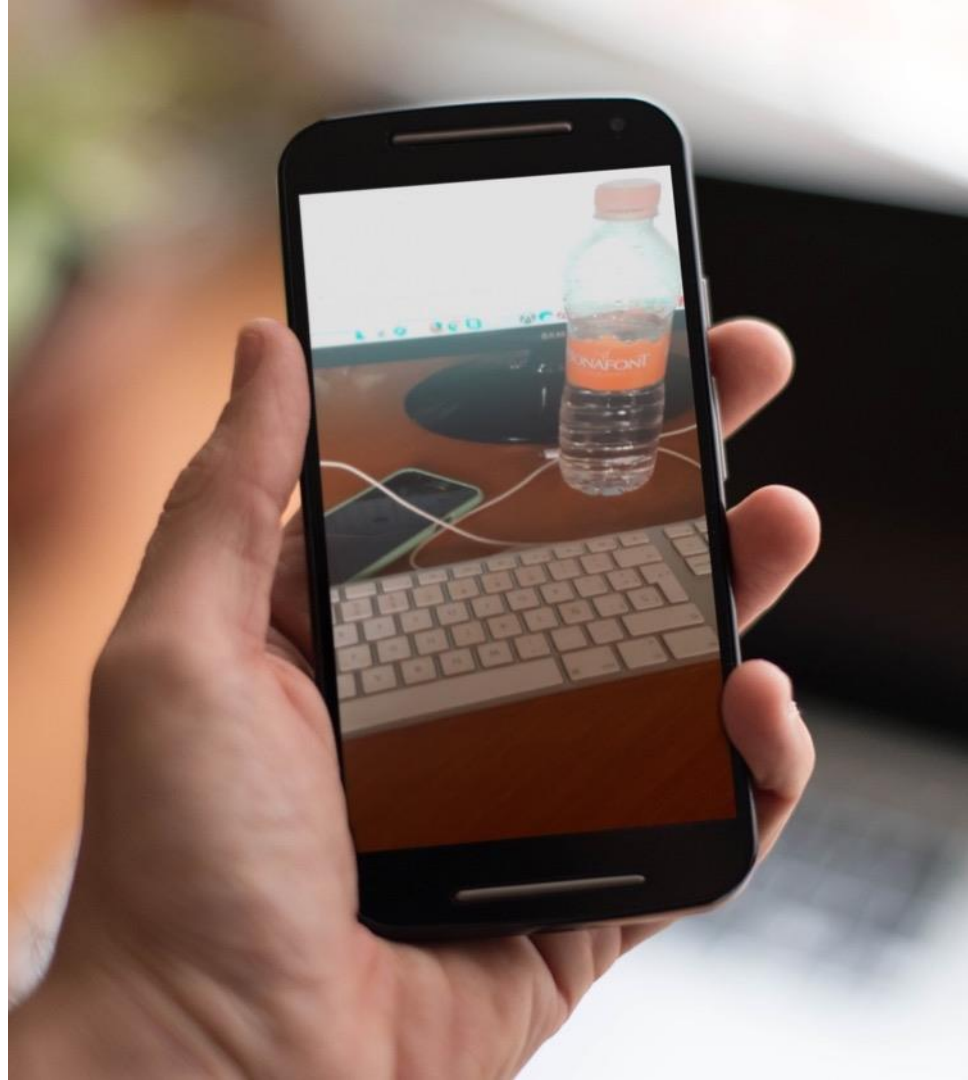
Smartphone

Water



Bottle

Product Design



Total of images: **1,818**

Main Results: Images



Human Coder



Google Vision

Cost

Analyzing 1,818 images

553€

1.27€

Images

properly coded

1,818

1,059

Time spent

2,100 minutes

~ 72 seconds per image

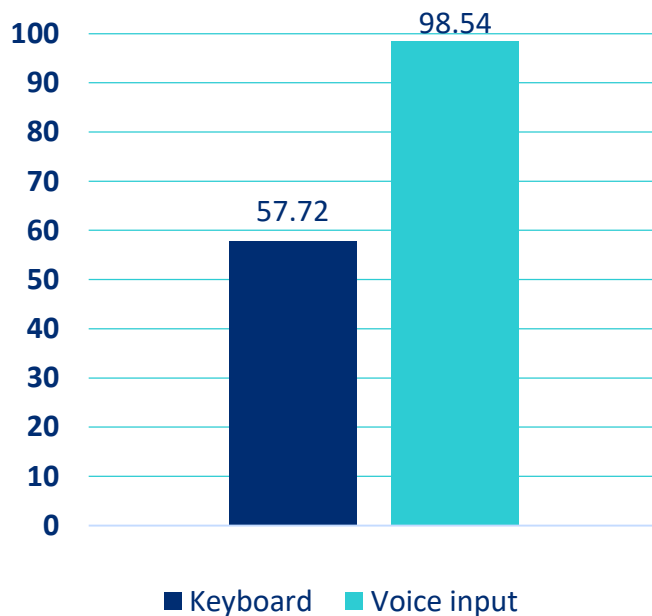
<5 minutes

~ 0.12 seconds per image



Main Results: Voice

- The combination of using a Voice Recording tool with the Google Cloud Speech API generated longer answers than a normal text box.
- Voice input options increase the number of characters typed by 70.7 %.



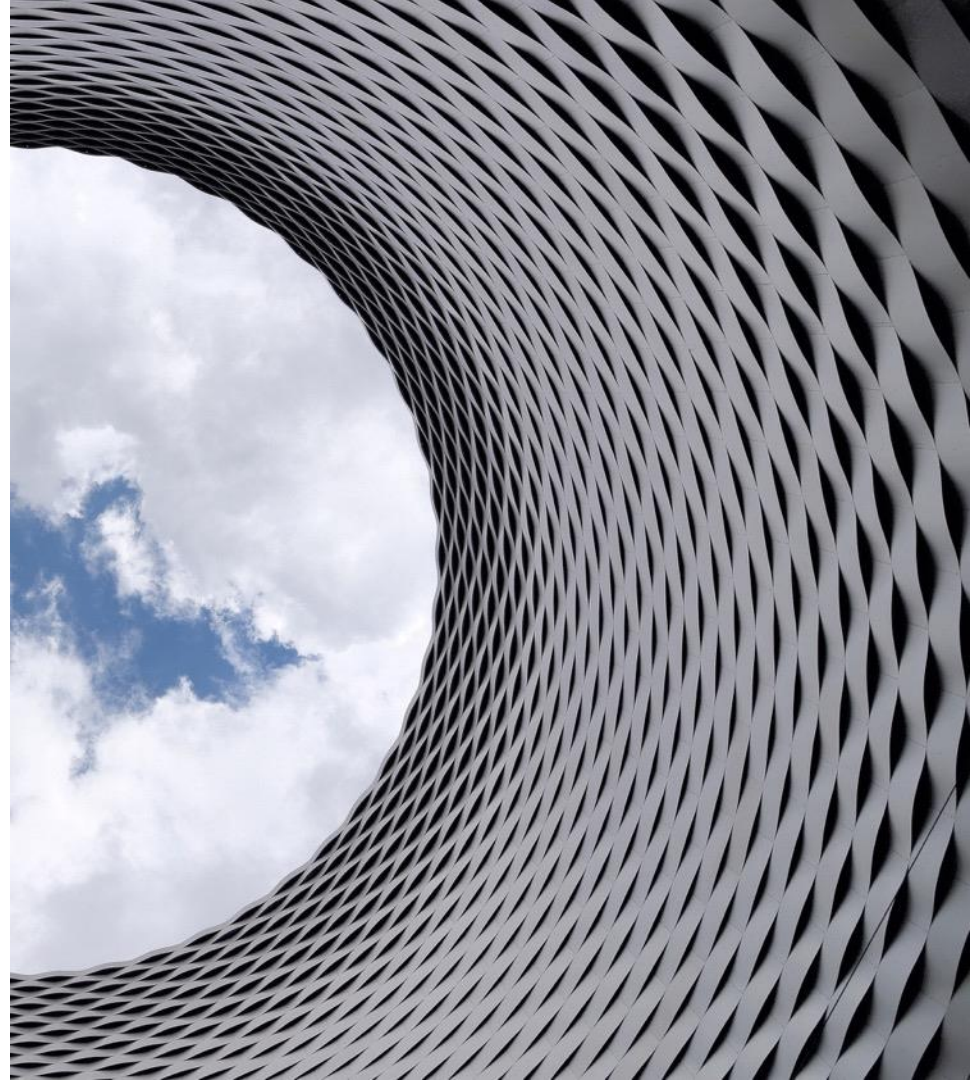
Future Research / Applications

- We can use API + Images for descriptive analyses purposes
- We can use API + Voice input to increase data quality
- New door to a wide range of new applications (Sentiment)
- New opportunities, avoiding fake accounts is just one! (Bots)



Market Research faces many challenges and huge opportunities

- The Market Research palette of solutions is more diverse than ever.
- We must be aware of the opportunities with Technology
- Technology can take us much further. Let's embrace it!
- Market Research is about People understanding People.



Thank you!

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genuine data