Live Webinar

# How Attests Data Science Team Approach Audience Quality

23 September 2020

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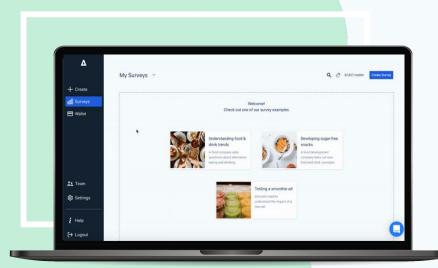


**Facilitator** 

**Lucy Chapman** 

**Events Manager** 





### We're Attest.

Attest was designed for ambitious marketers that aren't experts in doing research, but do need answers - fast.

Our survey platform connects you to 100 million consumers across 46 countries, making asking consumers questions and getting answers fast, easy, and scalable.



### Welcome & Housekeeping



- 25 minute presentation, 10 minutes for Q&A
- Please ask questions throughout using the box on the right of your screen
- This session is being recorded you'll receive the recording via email
- Look out for us launching some polls during the session
- You can use #AttestEvents
- Post-webinar survey





### Who Am I?



**Dr. Gökhan Çiflikli**Senior Data Scientist
Attest



### Today's Agenda

01

02

03

04

05

Data Annotation

Active Learning

Al-Assisted Labelling

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Fraud Detection



Q&A





### **Data Annotation: New Frontier**

How obtaining labelled data at scale become the new bottleneck in the industry



### **AI-Assisted Active Learning**

How we built our state-of-the-art machine learning infrastructure with a human-in-the-loop



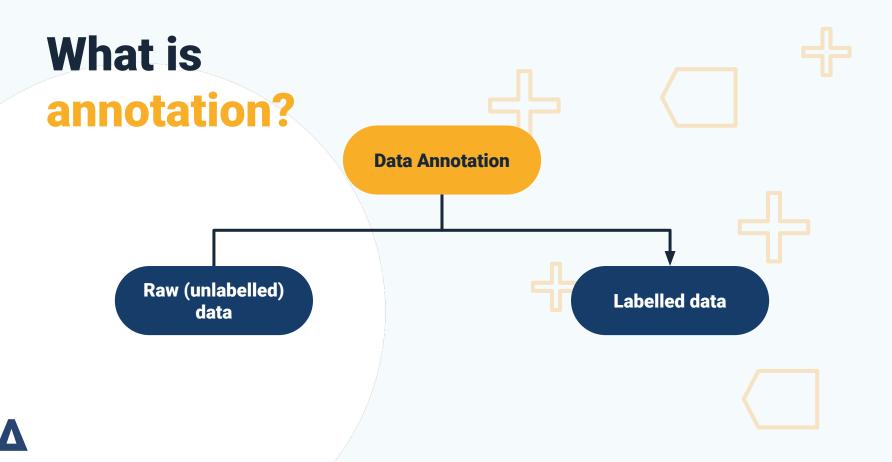
### **Fraud Detection & Data Quality**

How we leverage our algorithms to achieve unassailable level of audience quality



## **Data Annotation:**The New Frontier





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Time	Incoming Data Points	Human Annotation (120 labels/hr)	Labelled Data Percentage
1 day	138K	2 hrs/day, 2 people	0.4%
1 month	4.15M	4 hrs/day, 4 people	1.4%
1 quarter	12.5M	8 hrs/day, 8 people	5.8%
1 year	50M	8 hrs/day, 100 people	18%



## **Active Learning Human-in-the-loop**





### If we allow our algorithm to ask us:

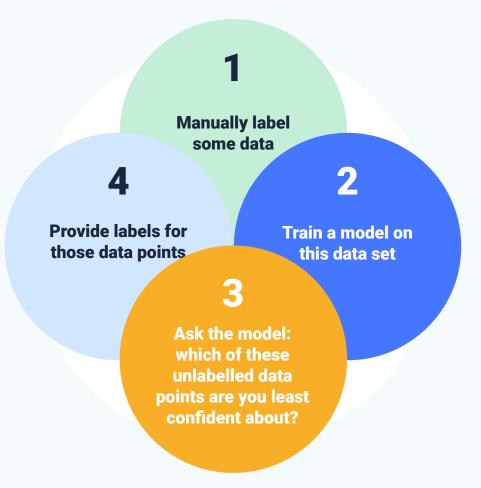


Hey, I'm not feeling very confident about my prediction for this respondent answer, can you help me out?

Would it perform better?



Active Learning Cycle.









"All good.
What else can we do to expedite the labelling process?"





## Al-Assisted Labelling



### If it looks like a duck

- **Predict labels** for unlabelled data points.
- Label the data points that the model is highly confident about.
- **Continue asking** for human annotation for least confident data points.





## Fraud Detection







We combine active learning with AI-assisted machine learning predictions to detect fraud in real time.







### Fraud Detection Algorithm Powering Attest

Answer Quality Context

relevance

**Gibberish** K@#Ø%!

**Swearing** Language!

**Speeders** 

Bots, Inattentive Humans **Answer Positions** 

Flatliners, overclaimers

**Demo- graphics**Impossible,
inconsistent





### Top 3 Takeaways

- O1. Humans provide labels for the most challenging cases to teach the model
- **02.** Models suggest labels for similar data points, instantly labelling 1000s of data points
- **03.** Combining both approaches, data annotation is handled at scale, internally





### **Questions**

Please use the box to the right of your screen to submit



### **Get in touch!**



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