GoVerify protects people from impersonation and deception fraud by validating the correspondence received from a trusted organisation is genuine without having to disclose any personal information.

GoVerify verifies calls, emails, texts and letters.
Augmented Analytics: Supercharging fraud prevention & payment conversion

London/Brighton, May 2019
Defining Augmented Analytics

What were the models of fraud prevention before ML?

Origins of Machine Learning
ML was born in early 50s, but the first business solutions were implemented in 2010.

Augmented Analytics
An approach that limits the need of human intervention in solving complex challenges, with the use of Machine Learning.

Before ML era, there were three main models for fraud prevention:

- Rules Based Logic
- Velocity Rules
- Text Anomalies
Introducing Machine Learning
How would you distinguish a legitimate user from a fraudster?
How would you distinguish a legitimate user from a fraudster?

Distance (buyer, airport)

Time to departure

Legitimate user
Fraudster

Airline Travel Payment Summit, 2019, #ATPS
How would you distinguish a legitimate user from a fraudster?

Distance (buyer, airport)

Time to departure

Legitimate user
Fraudster
How would you distinguish a legitimate user from a fraudster?

Distance (buyer, airport) vs. Time to departure
How would you distinguish a legitimate user from a fraudster?
How would you distinguish a legitimate user from a fraudster?
How does Machine Learning help us do the same thing better?
Building a decision tree:

A model which can scale to n dimensions!
Building a decision tree:

It allows us to generate “leaves”, in this case the model is perfect; often referred to as overtrained.
Building a decision tree:

We can push all our transactions through our tree to classify transactions.
Building a decision tree:
Life isn’t perfect! This tree looks more like a real model...

- mismatch between name given in the form and the one in mail
  - mismatch between declared sex and name’s sex
  - unusual biometric patterns
- clipboard used on sensitive fields
  - unusual plugins
  - suspicious email domain
- VPN used
Instead of strict rules...

- False positives
- False negatives

Distance (buyer, airport)

Time to departure

Legitimate user
Fraudster

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...you get a highly adaptive and efficient model that optimises your business decisions.
Reducing fraud in numbers
Bringing real value in the travel industry

ROC curve of a model built for the Airline Industry in LATAM

With 70,000+ transactions a month.

AUC = 0.92

Level of Precision

- 1% of traffic stopped
  70% of frauds caught

- 2.5% of traffic stopped
  77% of frauds caught

- 4% of traffic stopped
  80% of frauds caught
Bringing real value in the travel industry

Use case: adaptable velocity rules
How does this relate to conversion rates?
How does this relate to conversion rates?
How does this relate to conversion rates?

- mismatch between name given in the form and the one in mail
  
  - mismatch between declared sex and name's sex
  
  - unusual biometric patterns
  
  - unusual plugins
  
  - suspicious email domain
  
  - VPN used

- clipboard used on sensitive fields

Conversion

No conversion
Why you should use augmented analytics?

**High accuracy**

Ability to pinpoint trends difficult to spot by human

**Sustainability and flexibility**

The ML engine adaptable to new frauds without multiplying rules with impossible to understand impact

**Predictability**

Easy to follow progress regarding KIPs
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