



NARUC

2019 Annual Meeting & Education Conference

*Defending Yourself  
From Digital Risks Beyond Your Reach*

# #WhoAml



**Dr. Sam Small**

**Chief Security Officer, ZeroFOX**

15+ year security veteran

Practitioner, Researcher, Entrepreneur

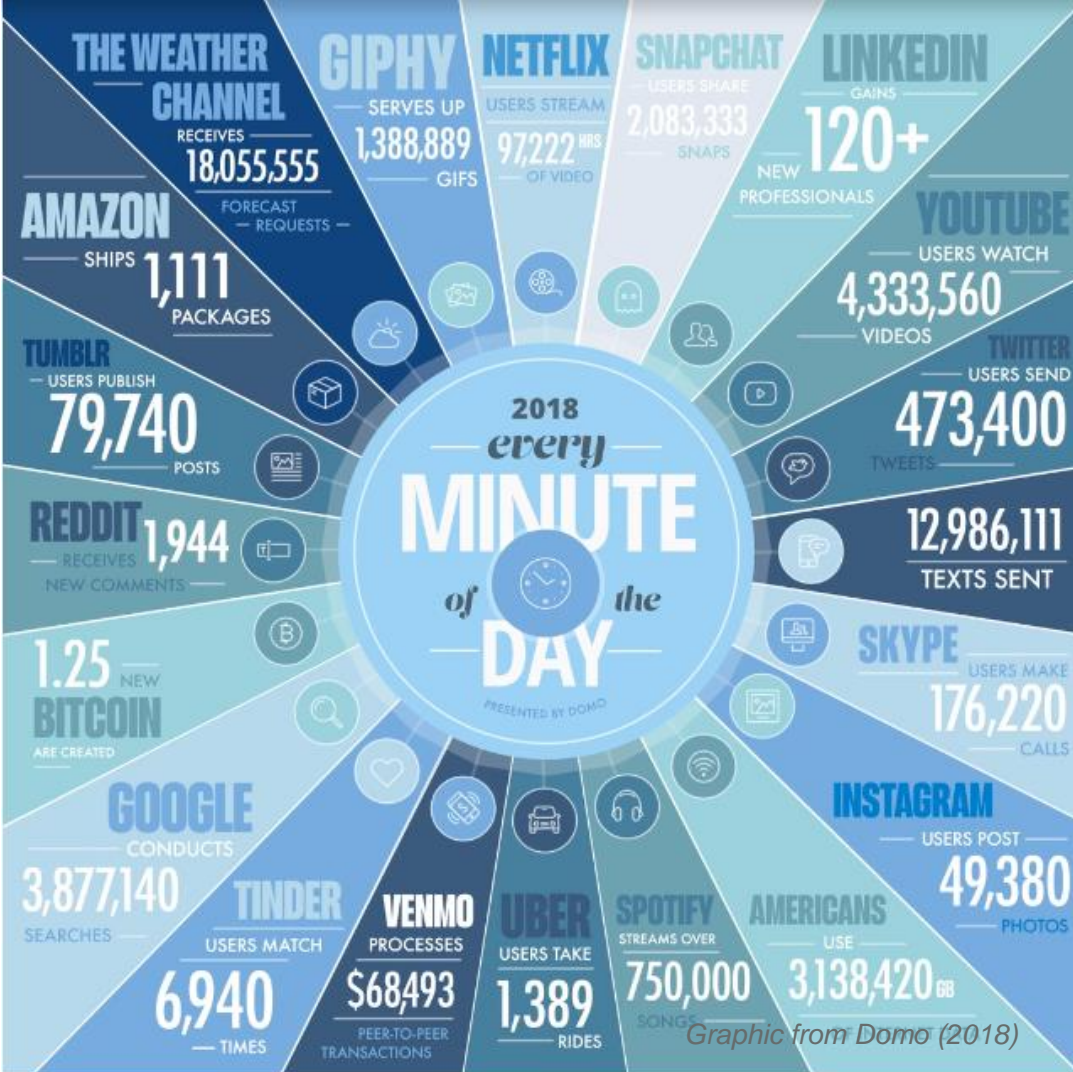
# Re: Securing Your “Perimeter”



**Your Business**

# The World Beyond Your Visibility & Reach





Graphic from Domo (2018)

# An issue of scale

**How much data is generated via digital channels?**

*For Facebook, every minute...*

- 510,000 comments are posted
- 293,000 statuses are updated
- 136,000 photos are uploaded
- 360 new profiles created

With 2.38 billion monthly active users

*How can you possibly find and respond to threats to your organization, customers, or community in that blizzard of communications?*

# Social is a Business Platform

## Social Use & Investment

**83%**

Global organization's  
use social as key  
business platform

**24%**

Total enterprise marketing  
budgets spent on social in  
next 4 years

## Social Media Impact

**40%**

Outperformance in  
revenues / valuation  
vs. S&P 500

**25B**

Spent on advertising  
products and businesses on  
social platforms globally

# Waning Digital Trust



A donut chart with a dark blue center and a dark blue outer ring. The outer ring is mostly filled with dark blue, with a small segment at the top left that is light gray, representing 70% of the total.

70%

In 2016 consumers **trusted** social media influencers more than traditional celebrity endorsements/ads



A donut chart with a red center and a red outer ring. The outer ring is mostly filled with red, with a small segment at the top left that is light gray, representing 60% of the total.

60%

In 2018 global consumers **no longer trust** social media platforms.





## IT and InfoSec Teams

can empower the secure use social platforms and gain intel from social media, deep, and dark web to identify and remediate threats.

## Corporate Security

use social media, deep web, and dark web content to achieve situational awareness and provide advance warning of exigent and imminent threats or trends.



## Marketing Teams

review social media, forums, and digital marketplaces to understand brand awareness, identify counterfeiting, prevent brand-related fraud, and improve customer confidence.



## Target

## Why / Impact

## Tactics

### Employees

Humans are compromised in order to bypass security defenses and gain access to “protected” systems and sensitive data



Hashtag Hijacking



Account Takeover



Impersonations



Attack Planning



Social Phishing



Social Engineering



Information Leakage

### Business Operations

Sensitive, confidential & protected information is published & malicious actions coordinated to damage revenue generating activities & trust

### Customers

Customers are targeted through fraudulent impersonations of the org and key executives to steal customer data & damage reputation

# Top 10 Tactics Bad Actors Use On Social Media

# Tactic #1 Account Hijacking



## New York Post

1.8 Facebook accounts hacked every second; 600,000 every day

## Harris Poll

2 in 3 social media users have had their accounts hijacked

## ZeroFOX FinServ Report

3 takeover attempts / mo. ave.  
30 targeted execs / org. ave.

# Tactic #2 Spoofed Accounts



## ZeroFOX

Instances of fraudulent accounts increased 11x in the past 24 months

## ZeroFOX

38% of brand impersonations drive users to phishing pages

# Tactic #3 Social Phishing/Malware

## Phishing Scam Targeting Netflix May Trick You With Phony Customer Service Reps

The Huffington Post | By Taylor Casti

Posted: 03/03/2014 5:12 pm EST | Updated: 04/17/2014 12:59 pm EDT



### Kaspersky

7.57 million victims of social phishing annually

### CISCO

Facebook is the most common delivery mechanism for malware; the #1 way to breach the network

### RSA

Global cost of social media phishing is \$1.2 billion

### Barracuda

92% of employees have experienced cyberattacks on social

# Tactic #4 Data Leakage / Breach



## E&Y

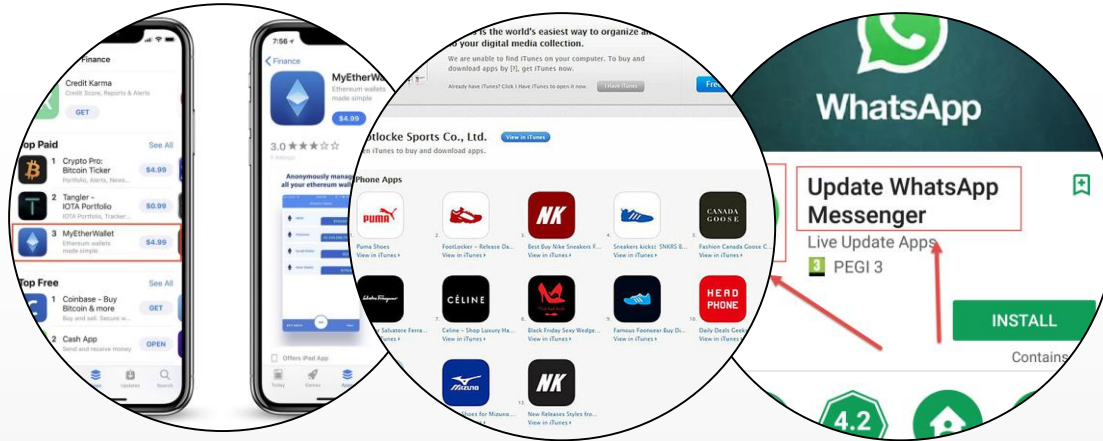
The average cost per record lost is \$214, data breach is >\$7M

## InfoWatch

Over 1,500 data leaks occur every year and 72.8% from insiders



# Tactic #5 Rogue Mobile Apps



**ZeroFOX**

75% of scams occur via mobile apps and social media



# Tactic #6 Business Email Compromise

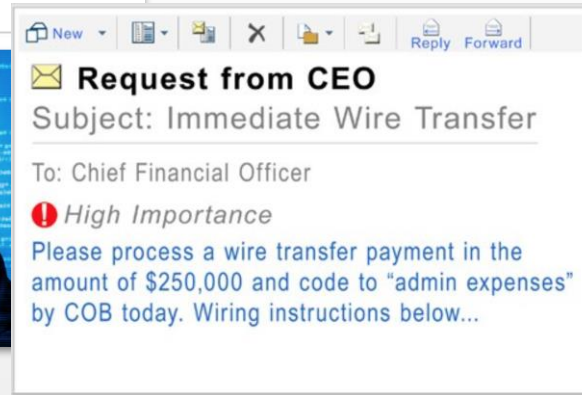


## FBI

Worldwide BEC losses doubled year-on-year to more than \$26 B

99% of attacks rely on a person somewhere in the chain taking an action

Cyber actors circumventing multi-factor authentication (MFA) through common social engineering and technical attacks



# Tactic #7 Threats of Violence

WIRED GAMING

Gaming

**Pokemon shooting was averted by paying attention to online threats**



Lizard Squad  
@LizardSquad



Follow

.@AmericanAir We have been receiving reports that @j\_smedley's plane #362 from DFW to SAN has explosives on-board, please look into this.

Reply Retweet Favorite More

RETWEETS  
191

FAVORITES  
106



3:29 AM - 25 Aug 2014

ROBBERY IN PARIS

**Kim Kardashian's Alleged Robber Confirms Social Media Helped Him Plan Heist**

"You just had to look at the Internet and you knew everything, absolute everything."

**Tennessee bank executive, family kidnapped, forced to rob own bank**

Published July 09, 2015 · Fox News



The New York Times

N.Y. / Region

WORLD U.S. N.Y. / REGION BUSINESS TECHNOLOGY SCIENCE HEALTH SPORTS

**Kidnapped Executive Is Rescued After 13 Days in Manhattan Crypt**

## US Survey

10% of Americans report experiencing physical threats online

Many physical threats originate online

Corporate security desires early warning and full situational awareness

# Tactic #8 Fraud & Scams: Coupons



## Coupon Information Center

400,770 fake coupons / year

## Cybersource

Retailers lost \$3.5 billion last year to online fraud

## ZeroFOX

75% of scams occur via mobile apps and social media

# Tactic #9 Fraud & Scams: Money-flipping

I'M DOING A SPECIAL WHERE YOU  
SEND 20\$ AND GET 400\$

I'LL BE DOING THIS SPECIAL FOR THE  
REST OF THE WEEK

DM IF INTERESTED

moneylymarie • Follow

App account hmu now !! Text  
"Cash" to 602-732-7197 !! Lets make  
some real money today !!  
account must be active for 2+  
months !! Serious Inquires Only  
!! Get Paid Now #cashapp #moneyflip  
#paypalmoney #paypal #paypalflip  
#cashappme #cashappflips #dt  
#cashappfriday #singleparent  
#legitcash #needmoney #moneyflipper  
#paypalflip #westernunion  
#moneygram #activebankaccount  
#bankaccount #paypalready  
#paypalbusiness #cashappcard  
#googlepay #paypalme #applepay  
#cashflips #moneyflip #fridaymoney  
#payday #wellsfargo #moneydeals  
#circlepay #venmo

Wednesday specials

\$25 - \$400	
\$40 - \$750	
\$50 - \$850	
\$70 - \$950	

4 likes  
3 HOURS AGO

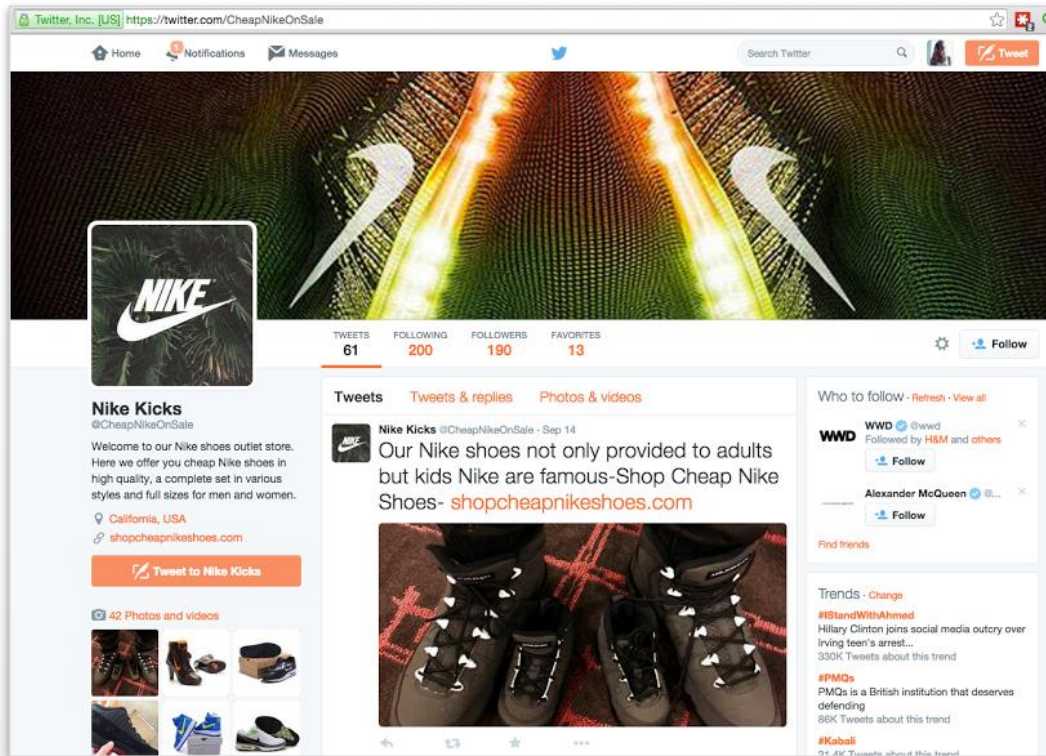
Add a comment... Post

## ZeroFOX

Money flipping scams on  
Instagram alone cost banks  
roughly \$420 million every year

Scams are posted 3x faster than  
they are taken down

# Tactic #10 Piracy & Counterfeits



## Consumer Fraud Center

2% of all goods sold online are counterfeit

## ACG

US businesses lose \$200B in revenue / year

## RIAA

7% of all internet traffic is directly related to online piracy

## Institute for Policy Innovation

Online piracy costs \$58 Billion / year globally

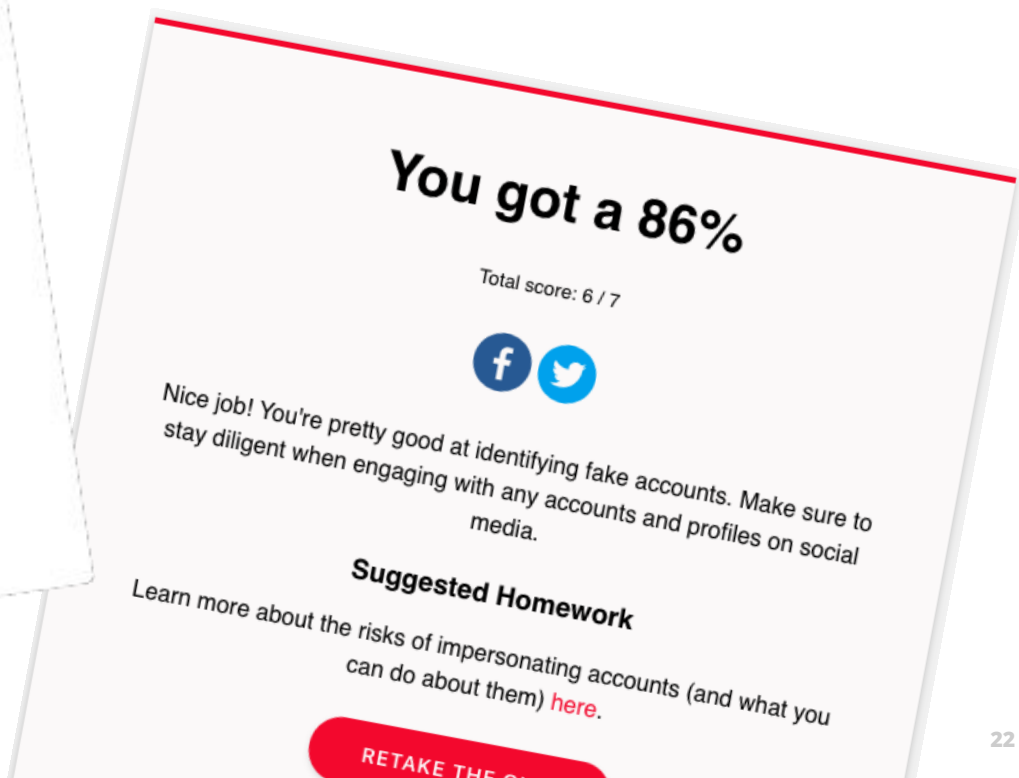
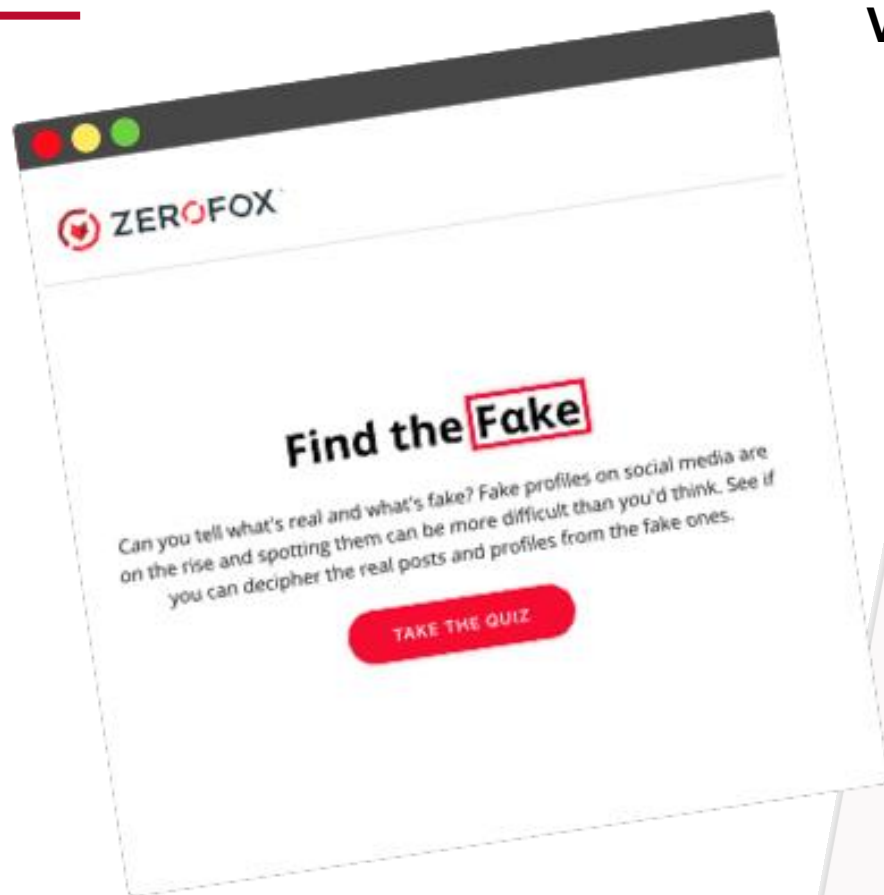




**Where do we go  
From Here?**

Visit the ZeroFOX Blog to Take the Quiz:

<https://www.zerofox.com/find-the-fake>





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On the horizon:

# The Age of DeepFakes



# Designing a Protection Platform



## Identify

Risks on social and digital platforms



## Protect

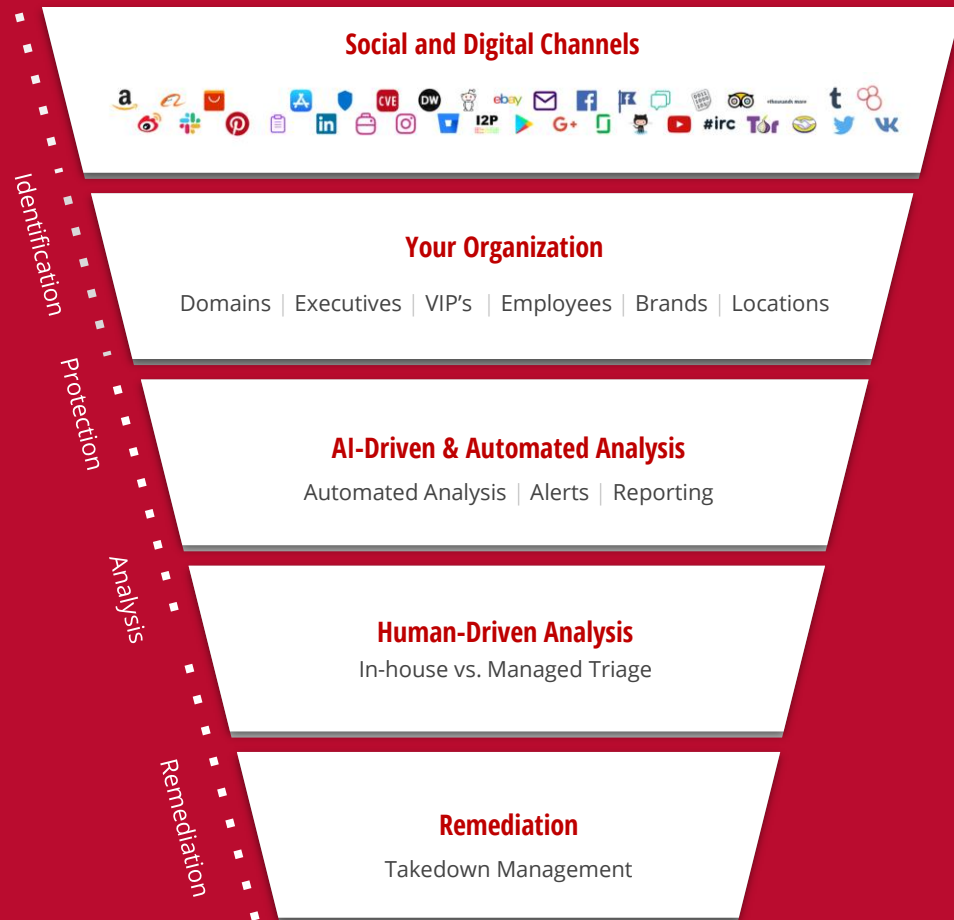
What matters to your organization



## Remediate

Threats to your brand and business

## Complete Digital Visibility & Protection



# About ZeroFOX

It's a Digital World. Engage Securely.

## Our Mission

ZeroFOX exists to protect people and organizations as they engage in the quickly expanding digital world

## Our Reach

With global reach in United States, United Kingdom, Canada, Chile and India, ZeroFOX provides best in class software, support and services to organizations of all sizes.



*The Atlantic*



# Artificial Intelligence Analysis

## Machine Learning

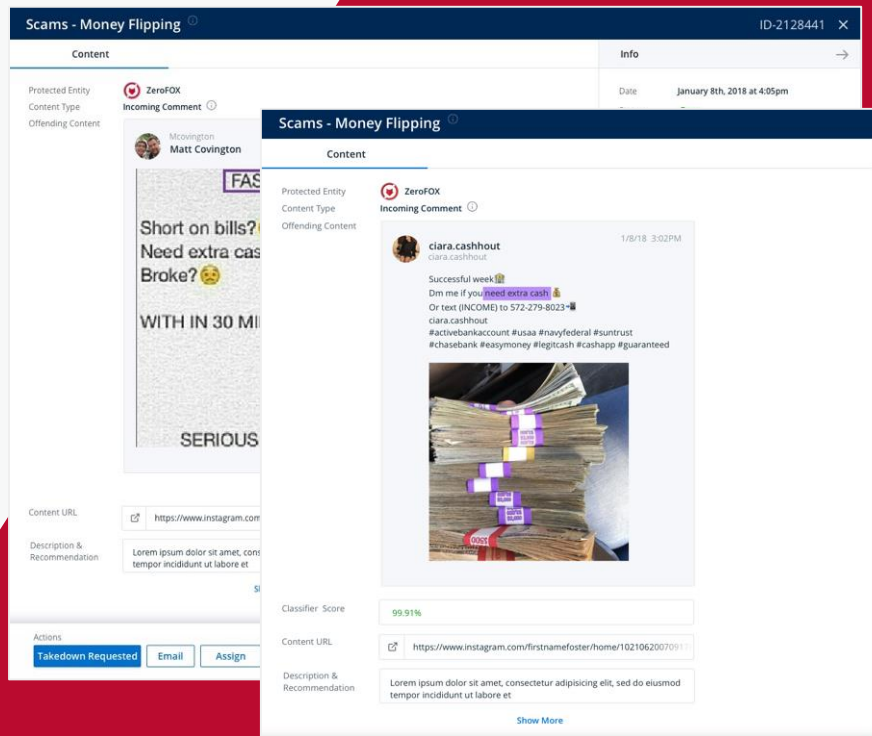
Systems, such as classifiers, to detect specific threats including impersonations and money flipping scams

## Natural Language Processing

Capabilities, including sentiment analysis, to more accurately detect malicious content

## Computer Vision

Tools, including Optical Character Recognition (OCR), to extract additional threat indicators in images



# **ZEROFOX** **ALPHA TEAM**

Research | Respond | Advise | Train



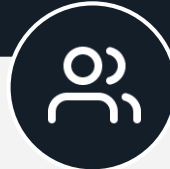
## Global Threat Research

- Advanced threat hunting
- Research Advisories
- Information sharing within security ecosystem
- Threat reports, blogs, media



## OnWatch™ Analysis

- Expert SOC team
- 24/7 Alert triage & escalation
- Custom risk analysis
- Platform tuning



## Expert Services

- Custom policy creation
- Custom reporting
- Custom integrations
- Event Monitoring, Incident Response and Investigations
- Risk Assessments



## ZeroFOX University

- Certified Security Analyst (CSA)
- Certified Security Engineer (CSE)
- Advanced FoxScripting

# Thank You



**Dr. Sam Small**

Chief Security Officer, ZeroFOX

[ssmall@zerofox.com](mailto:ssmall@zerofox.com)