# The Evolution of Al in Security

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TECH

HP, Dell See Swelling Backlogs Amid Hot Demand for Computers

By Maria Armental August 26, 2021 05:05 pm ET

By Stella Yifan Xie and Jon Emont September 1, 2021 07:43 am ET

HEARD ON THE STREET

Chewy's Pandemic Run Comes to an End By Jinjoo Lee September 2, 2021 06:33 am ET Americans Are Stocking Up on Toilet Paper Again

By Jaewon Kang and Sharon Terlep August 31, 2021 04:16 pm ET

COMMODITIES

Aluminum Hits Decade High After Guinea Coup

By Will Horner September 6, 2021 12:19 pm ET

# Supply chain leaders are looking for actionable visibility and control based on real-time analytics for digital transformation

85%

of companies felt that supply chain complexity is a significant and growing challenge for their operations

70%

of Consumers look at very specific attributes and willing to pay 37% premium for full transparency

97%

of companies recognize the importance of and are prioritizing efforts to improve end-to end supply chain visibility

33%

of products from farmers goes uneaten, accounting for \$161B USD in food waste

50%

of manufacturers will use supply chain orchestration tools for innovation delivery and disruption avoidance by 2024

60%

of consumers willing to change shopping habits to reduce environmental impact



# **Nutrition Fa**

Serving Size Servings Per Container

Amount Per Serving

Calories Calories from

Saturated FatgCholesterolgSodiumgTotal Carbohydrateg

**Total Fat** 

Dietary Fiber g
Sugar g

**Protein** g

Vitamin A % • Vitamin Calcium % • Iron

\*Percent Daily Values are based on a 2,00 Your daily values may be higher or lower or your calorie needs.

# YouTube sued for using AI to racially profile content creators

They claim YouTube's algorithms discriminate against black users

## BlackRock shelves unexplainable Al liquidity models

be explained

Sections =

Risk USA: Neural nets beat other models in tests, but results could no Data science during COVID-19: Some reassembly required

> Most likely, the assumptions behind your data science model or the patterns in your data did not survive the coronavirus pandemic Here's challenges of model drift

Over-Segmenting In Financial Services Is So Over - Bye, Bye

Can AI models respond to black swan events like COVID-19?

Get 1 year for \$29 Democracy Dies in Darkness Apple Card algorithm sparks gender bias allegations against Goldman Sachs

The Washington Post

RETAIL OCTOB

Amazon scraps secret AI recruiting tool that showed bias against women

EFF to HUD: Algorithms Are No Excuse for Discrimination

Rising concerns over trust in Al

# The Al opportunity

All is the largest economic opportunity of our lifetime, estimated to contribute **\$16 trillion** to global DP by 2030.

- Al and automation will fuel the future of work.
  - Enterprises spend over
     120 billion hours a year
     on low-value work.

- 3 in 4 business are exploring or deploying Al.
  - CIOs cite AI as the #1 game-changing technology.

- Winners will scale the value of data with Al.
  - > 90% of data is either inaccessible, untrusted, or unanalyzed.









# Trustworthy AI: Governed Data and AI

- 1. Transparent: open to inspection
- 2. Explainable: easy to understand outcomes/decisions
- 3. Fair: impartial and bias mitigated
- 4. Robust: handles exceptional conditions effectively and minimizes security risk
- 5. Private: fueled by high integrity data and is business compliant



# Cost of a Data Breach Report

537 breaches studied

3,500 interviews

17 countries/regions

17 industries

17<sup>th</sup> year

IBM Security / © 2019 IBM Corporation



# Key findings

- Data breach costs reached a record high, increasing to \$4.24M USD.
- The United States (\$9.05M) was the costliest country. Healthcare (\$9.23M) was the costliest industry.
- The biggest cost savings was due to security
  AI and automation. Breach costs at orgs with
  fully deployed security AI/automation had an
  average cost \$3.81M less than orgs with no
  security AI/automation deployed.

- A zero-trust approach was effective at mitigating costs. Breaches at orgs with mature zero trust deployment were \$1.76M less than orgs without zero trust.
- Cloud breaches were least costly in hybrid cloud environments. Breaches in hybrid clouds cost an average \$1.19M less than breaches in public clouds.
- Remote working due to COVID-19 increased cost. Breaches where remote work was a factor averaged \$1.07 million more than breaches where remote work was not a factor.

BM Security / © IBM Corporation 2021

# Global highlights



Global average cost of a data breach

10%

increase from 2020

\$1.07M

Cost increase where remote work was a factor in the breach

\$402 million

Average total cost of a breach of >50M records

\$3.81 million

Cost savings due to security
AI and automation

\$180

Cost per record for compromised customer PII

20%

Share of breaches caused by compromised credentials

Top 3 cost amplifying factors

- 1. Compliance failures
- 2. System complexity
- 3. Cloud migration

Top 3 cost mitigating factors

- 1. AI platforms
- 2. Encryption
- 3. Analytics

#### Time to identify and contain

Global average: 287 days

212 days to identify

**75** 

days to contain

### \$2.46 million

Average cost savings with incident response teams and IR testing vs. no IR teams or testing

\$9.23M

Average cost of a data breach in healthcare

Highest cost of 17 industries studied

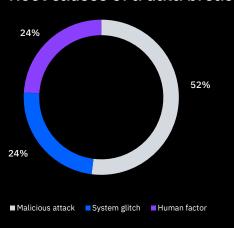
118% difference from\$4.24 million global average

#### **Key statistics**



Healthcare organizations with fully deployed security automation

#### Root causes of a data breach



#### Global highlights





\$401 million

Average total cost of a breach of >50M records

\$180

Cost per record for compromised customer PII

#### Time to identify and contain

Healthcare industry

241	days to identify		94 days to con
Glob	al average		
212	days to identify	<b>75</b> days	s to contain

\$2.46 million

Average cost savings with incident response teams and IR testing vs. no IR teams or testing

Source: Ponemon Institute (IBM sponsored) Cost of a Data Breach 2021 Report

# Workflow



### **Advanced Analytics**







### Cognitive



**ENRICH** 

### **Threat Hunting**





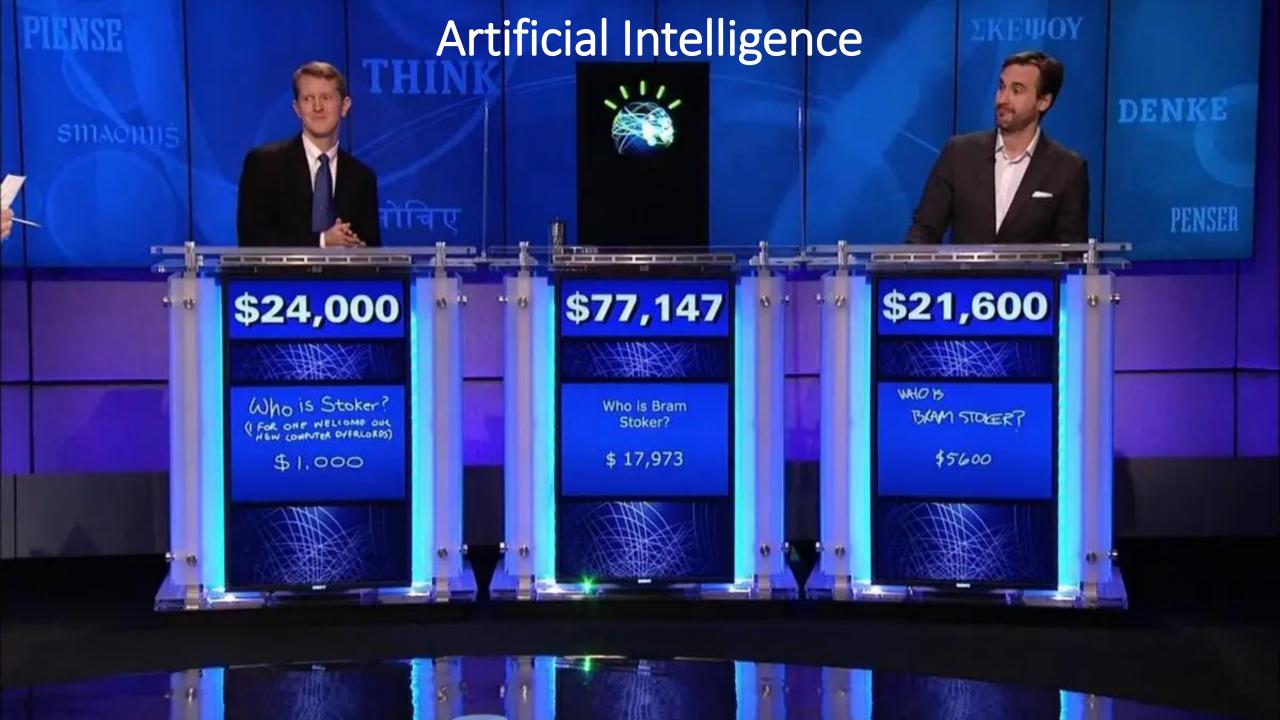
### **INVESTIGATE**



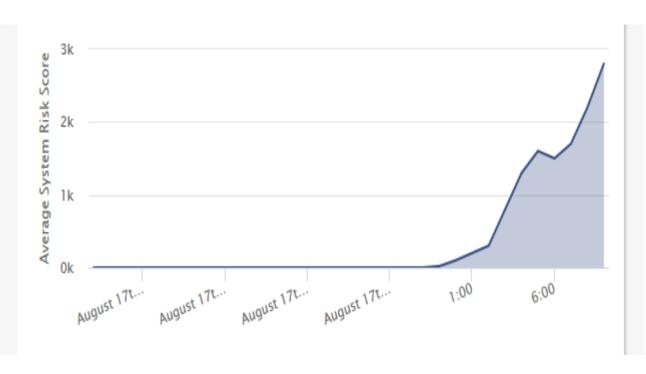
### **ORCHESTRATE**

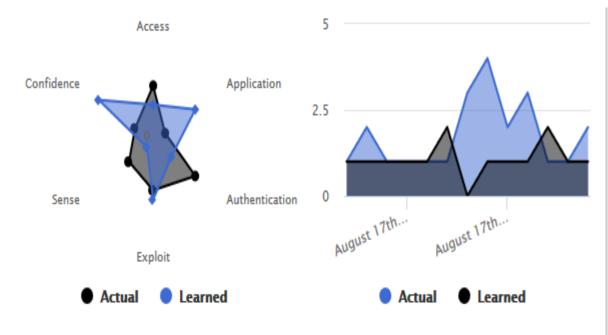






# System and User Risk Scoring with Triggers

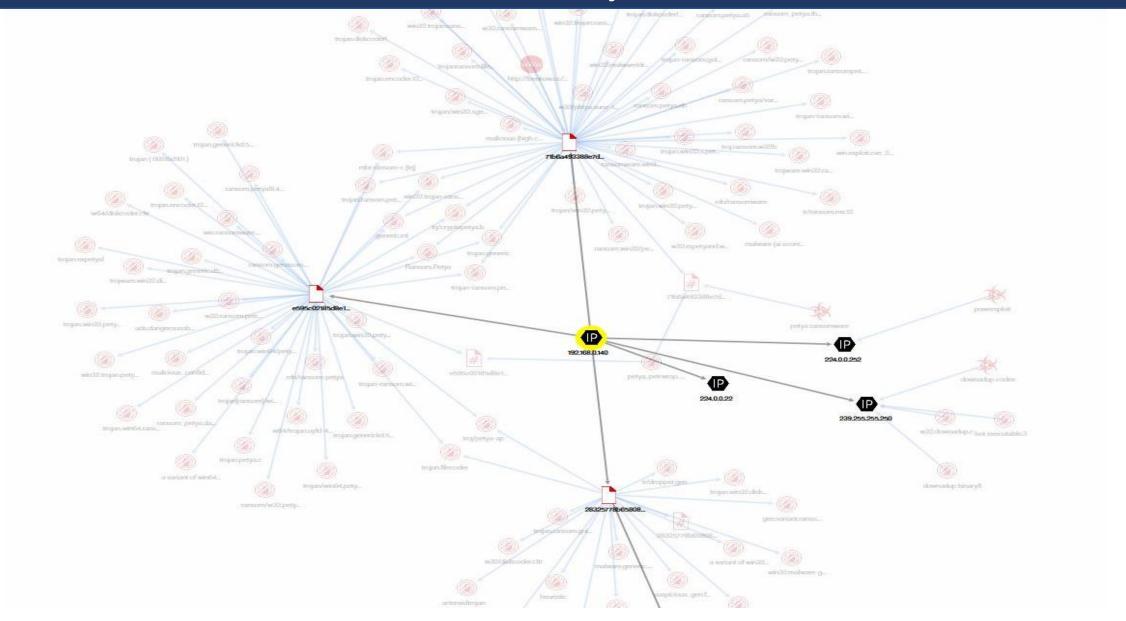




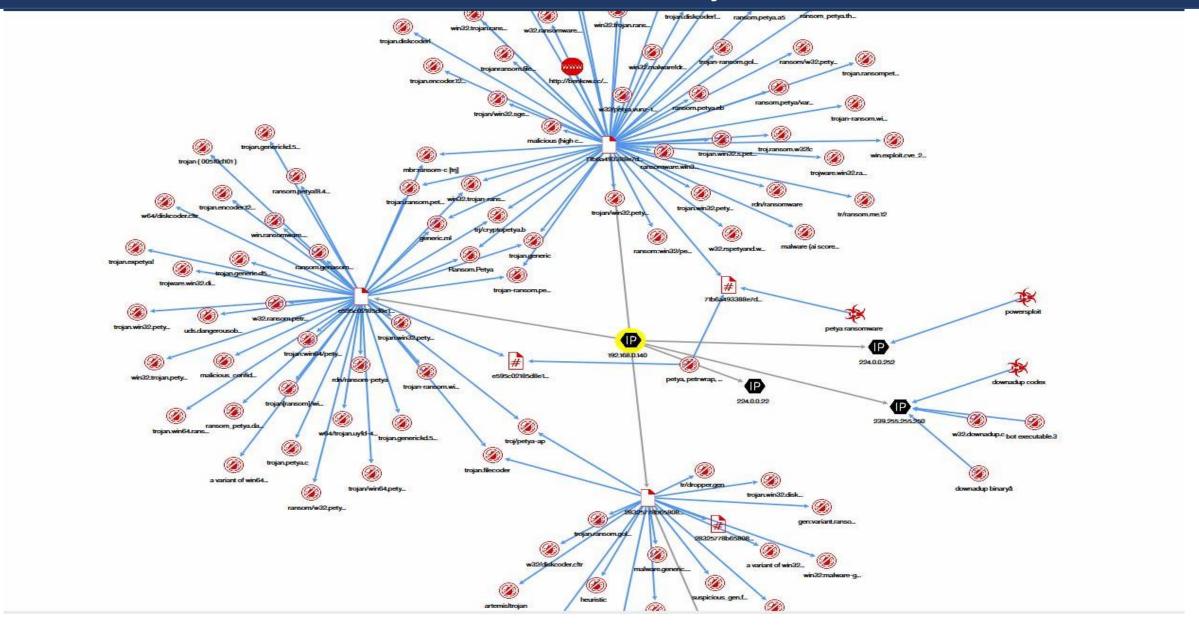
**Step Up Authentication** 

**Auto Disablement/Containment** 

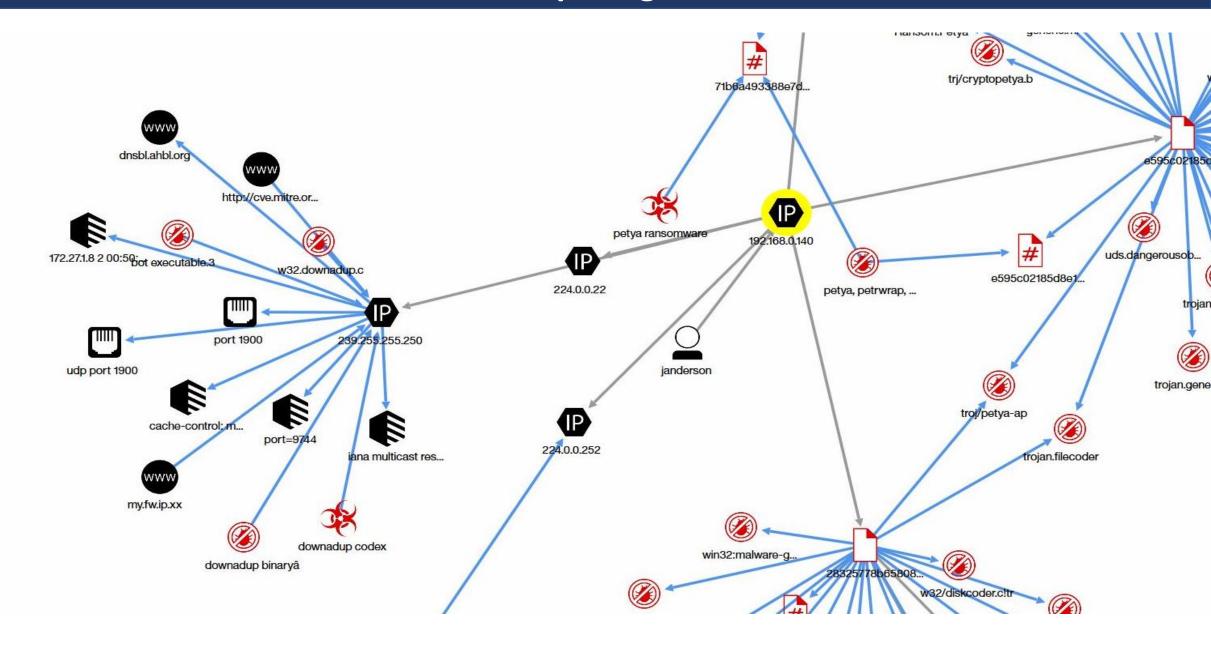
# **Local Analysis**

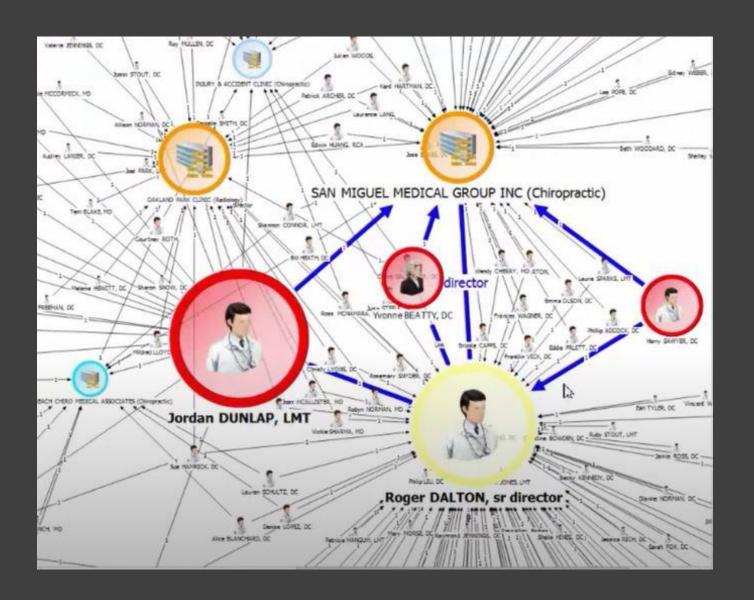


# **Al Enriched Analysis**



# Al Deep Insight

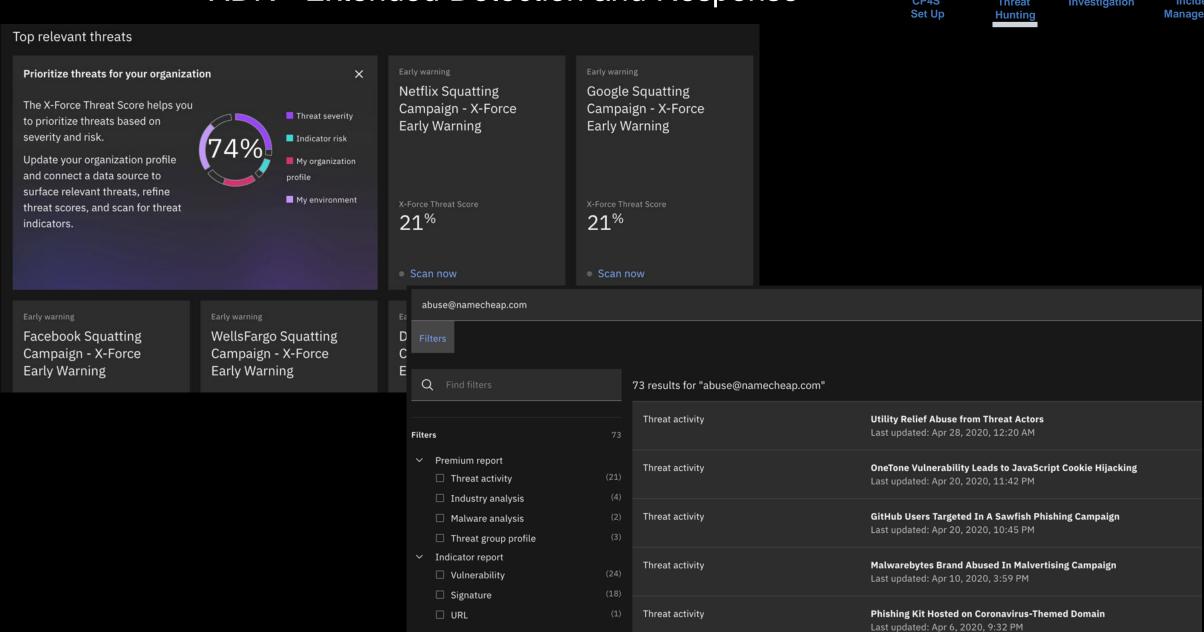




# Threat Hunting

### XDR - Extended Detection and Response





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