Protecting your company from the risks of using AI

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> Building a better working world

Today's speakers

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Today's objectives

- Discuss how artificial intelligence (AI) is creating new ethical and moral questions that go far beyond the traditional scope of compliance
- Identify the risks companies need to consider as they make increasing use of AI
- Describe how algorithms that replicate human decision-making can produce unintended outcomes
- Understand the significant regulations designed to promote the ethical use of data and what may lie ahead
- Analyze four key ways companies can protect themselves against AI risks

Al is becoming central to risk management

- Al is becoming a central pillar in risk management strategy by:
 - Quickly analyzing vast volumes of data from disparate sources
 - Discovering new patterns not visible to humans
 - Serving as the new building block of data architecture
- Al is shaking compliance to the core, requiring changes in:
 - Methodologies to manage data
 - Human resources to manage technologies and risks
 - Processes to fulfill corporate objectives, meet compliance requirements and innovate to drive growth and revenue

Al greatly enhances the ability of a company to defend against external and internal threats, but ...



How ethical is your algorithm?

- Al is creating new ethical and moral questions that go far beyond the traditional scope of compliance: "ethics of the algorithm."
 - Algorithm is defined as "a procedure for solving a mathematical problem in a finite number of steps that frequently involves repetition of an operation." (Merriam Webster)
 - Algorithms aggregate, transfer, analyze, transform, share and create data
 - Data used for algorithms may not have the controls and due diligence applied to data stored or shared in more traditional forms
 - Al runs on data strings of algorithms



- Who owns it?
- Who hosts it?
- Who collects it?
- Who harvests it?
- Who benefits from it?
- How can it be safely stored, exchanged, transferred and disposed of?
- How is ownership transferred among stakeholders?
- Have you complied with all applicable regulations?

Using AI can make these questions even more complex.



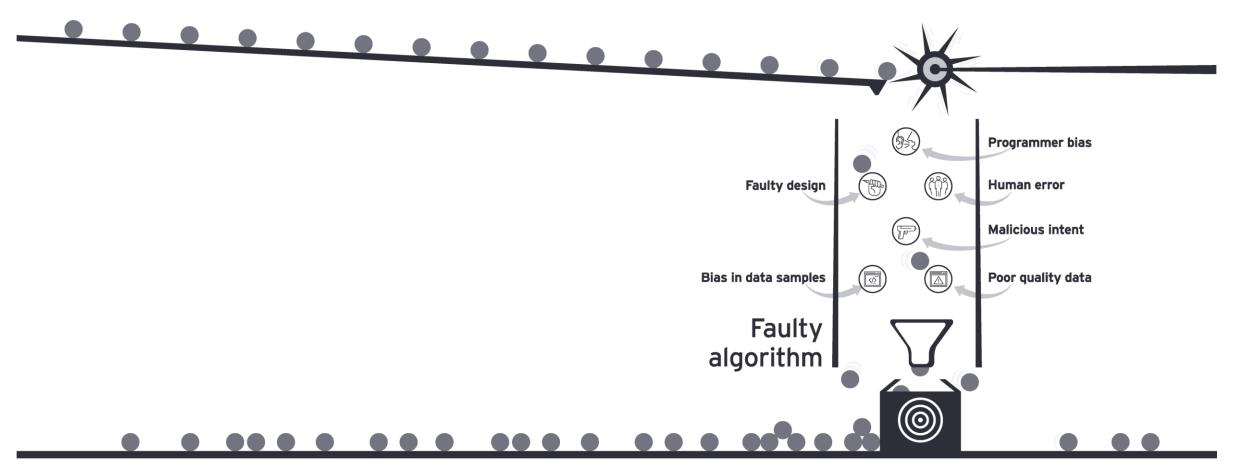
Data integrity is more challenging than ever

- Corporate data was traditionally filtered through a familiar, and relatively transparent, hierarchy of expertise, intellectual exchange and debate.
- Today, the origin of the data and the assumptions underlying it are now concealed within the algorithm.
- Improper use or misuse of data collected by companies includes:
 - Selling personal data to third parties with insufficient user consent
 - Accidently passing on proprietary data to third parties
 - Failing to protect data from security breaches caused by cyber attacks or human error
 - Failing to minimize personal data
- Businesses face huge risks: regulatory fines, court settlements, reputational damage and impact on revenues.





An algorithm is only as good as its inputs



Harvested, stored, exchanged and transferred data

Polling question #1

Which of these is NOT an example of something that could result in a faulty algorithm?

- a. Bias in human programmer
- **b.** Bias inherent in the data itself
- **c.** Robotic process automation (RPA)
- d. Malicious intent

How an AI recruiting tool rejected women

- Reuters reports Amazon built an experimental hiring tool designed to automatically score job candidates.¹
- The machine-learning tool was trained to detect patterns in 10 years of resumes.
 - Taught itself male resumes were preferable
 - Tool penalized resumes with "women" (women's chess club caption) and graduates from all-women colleges
- Amazon edited the programs to become gender-neutral but eventually ended the project.



¹ Jeffrey Dastin, "Amazon scraps secret AI recruiting tool that showed bias against women," Reuters, 9 October 2019.

Al algorithms can pose legal challenges

- Criminal risk assessment algorithms estimate the likelihood a defendant will flee or reoffend turning correlative insights into causal scoring mechanisms.
- A judge may factor scores into decisions, such as:
 - Whether a defendant will be held in jail before trial
 - Severity of sentence

- Civil rights groups say machine-learning algorithms could amplify and perpetuate embedded biases, generating even more bias-tainted data.¹
- Most risk assessment algorithms are proprietary, so it's impossible to hold them accountable.

¹ "More than 100 Civil Rights, Digital Justice, and Community-Based Organizations Raise Concerns About Pretrial Risk Assessment," 30 July 2018, The Leadership Conference on Civil & Human Rights, https://civilrights.org.

Companies suffer reputational setbacks due to the loss of control of AI processes

- Cambridge Analytica allegedly used data improperly obtained from Facebook to create voter profiles aimed at influencing the 2016 US presidential election.
- In 2018, after Uber's deadly self-driving crash in Tempe, Arizona, investigators determined the system classified a woman walking her bike outside a crosswalk as an object, not a person.
- Clearview AI stopped selling its facial recognition app to private companies in 2020, after being sued in Illinois for collecting and storing biometric data without consent.
- Facebook expects to pay US\$650 million, subject to court approval, to settle a class-action lawsuit in Illinois over its use of facial recognition technology.

Which of these statements is TRUE?

- a. The scandals had little impact on privacy regulations.
- **b.** A federal US privacy law that prohibits companies from harvesting facial data without user consent led Facebook to agree paying \$650 million to settle a class-action lawsuit.
- c. US civil rights groups are requesting machine-learning algorithms replace judicial deliberations in determining bail for defendants because AI eliminates human bias.
- d. An experimental Amazon hiring tool taught itself that male resumes were better than female resumes.

Companies face increasing scrutiny on data management

- How do companies manage data for their own benefit while protecting an individual's privacy rights?
- How do companies respect other organizations' intellectual and data property?
- How do companies work with third parties to safeguard customer data?
- How should companies respond to rapidly evolving regulations around the world?



Influential data privacy initiatives around the globe

General Data Protection Regulation (GDPR –) 2018

- Protects EU data subjects
- Provides the right to be forgotten and data portability
- Requires clear consent to use personal data
- Requires timely breach notification
- Requires data controllers and processors to secure personal data

California Consumer Privacy Act (CCPA) – 2020

- Protects California consumers
- Provides the right to data access and the right to delete personal information
- Allows consumers to opt out of having personal data disclosed or sold to third parties
- Does not regulate cybersecurity but establishes a right of action for certain breaches

UK Digital Charter – 2018

- Develops norms for using personal data safely and ethically
- Protects the same rights people enjoy offline

Other statutes

- Australia's Privacy Act
- Japan's Personal Information Protection Act
- China's Cybersecurity Law
- Brazil's General Law for Data Protection



The future of AI regulation

- Governments are exploring whether existing laws and regulations can deal with emerging challenges posed by AI.
- The European Union, United Kingdom, Singapore, Australia and Germany are all actively considering regulations regarding the ethical use of AI and preventing bias in the application or development of AI systems.
- In 2020, US issued principles that federal agencies should consider when devising laws and rules for the use of AI by businesses, with the goal of limiting regulatory "overreach."



Which one of the statement is correct?

- a. The GDPR does more to address cybersecurity.
- b. The CCPA has not yet been enforced while the GDPR has been enforced for two years.
- c. Both laws require users to opt in to having their personal information sold to a third party.
- d. The GDPR applies to any company with EU customers while the CCPA applies only to companies physically located in California.

How can you better protect your company against AI risk?

How can you take more ownership and responsibility for your data?

- How can you make sure the algorithms that underlie the myriad processes that go into a business decision are under control?
- How can you be certain there is human oversight over the system?
- How can you make sure you are complying with regulations wherever you do business?

Four ways companies can protect themselves from AI risk – continued

- 1. Companies need highly sophisticated data management, information tracking and security systems.
 - It's important to understand where a unit of data is coming from, where it is going and how it will be processed between these two points.
 - Algorithm monitoring systems and advanced data analytics are needed.
 - Internal auditing is insufficient to analyze the volume of data being processed and to monitor internal controls.
 - Al itself should audit and monitor Al systems, but human oversight is still important.

2. Companies need to invest in human resources.

- All employees, especially leadership, must understand how Al impacts the business and stakeholders, as well as the consequences of failing to understand its risks.
- Traditional department silos should be broken up, creating a cross-functional approach to managing AI risks and opportunities.
- Individual managers will need to be multifunctional, with knowledge of legal, compliance and IT requirements.
- Humans need to control AI, with senior executives knowledgeable enough to provide effective oversight.

Which of these statements is FALSE?

- a. Internal auditing is the best way to analyze the volume of data being processed by an AI system and to monitor internal controls.
- b. Employees, clients and business partners should be legally obligated to safeguard information that is proprietary or subject to privacy rules.
- c. Companies need to fully understand how their third parties access, use and store data to minimize the risks of data breach and noncompliance.
- d. Monitoring AI systems effectively requires both human and artificial intelligence.

Four ways companies can protect themselves from AI risk

3. Companies need to make sure they are legally protected.

- Employees, clients and third-party business partners must be legally obligated to safeguard information that is proprietary or subject to privacy rules.
- Data processors must follow well-defined contractual requirements governing the use of data.
- Companies need transparency into how third-parties access, use and store data to minimize the risks of data breach and noncompliance.
- Companies must carefully vet third-parties and be assured of their internal controls.

Four ways companies can protect themselves from AI risk – continued

4. Companies need to open themselves up to influences in the market.

- Companies will find strategies in dialogue with others.
- By pooling resources and brain power, companies are likely to find technological and managerial applications faster and more efficiently.
- Companies should explore platforms, in which AI issues are being actively discussed from the point of view of business and society.

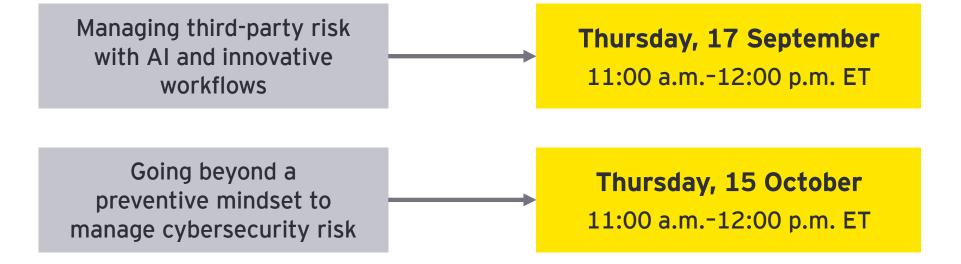
Multi-stakeholder platforms discussing ethics and technology

- Al Now Institute: NYU research institute that examines the social implications of artificial intelligence
- Algorithmic Justice League: advocacy group developing practices to reduce algorithmic bias and increase accountability
- Center for Technology Innovation (Brookings Institution): produces research designed to impact public debate and policymaking
- Centre for Data Ethics and Innovation: UK government initiative that connects policymakers, industry and the public with the goal of developing a governance regime for data-driven technologies
- EU High-Level Expert Group on Artificial Intelligence: supports the implementation of the European Strategy on Artificial Intelligence
- Partnership on AI: advances the understanding of AI technologies for the benefit of society

Which one of these statements is FALSE?

- a. Managing AI effectively requires a cross-functional approach, with knowledge of legal, compliance and technical requirements.
- b. An algorithm clearly shows where the data used to create it originated and the assumptions underlying that data.
- c. Programmer bias, human error, faulty design and poor-quality data can all contribute to a faulty algorithm.
- d. Al consists of strings of algorithms.

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