

# The Ethics Of Analytics

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Chief Analytics Officer



INTERNATIONAL  
INSTITUTE FOR  
ANALYTICS™

# Model Bias Isn't Just In The Scores

**LOAN APPLICATION**

**STEP 1**

NAME: John	SURNAME: Smith
ADDRESS: Green Street 1544	CITY: New York
COUNTRY: United States of America	ZIP CODE: 10014

**STEP 2**

PROPERTY SALE PRICE: 100000 USD	DOWN PAYMENT: 10000 USD
MORTGAGE AMOUNT: 90000 USD	TERM: 60 months
INTEREST RATE: 15%	MONTHLY MORTGAGE PAYMENT: 2400 USD

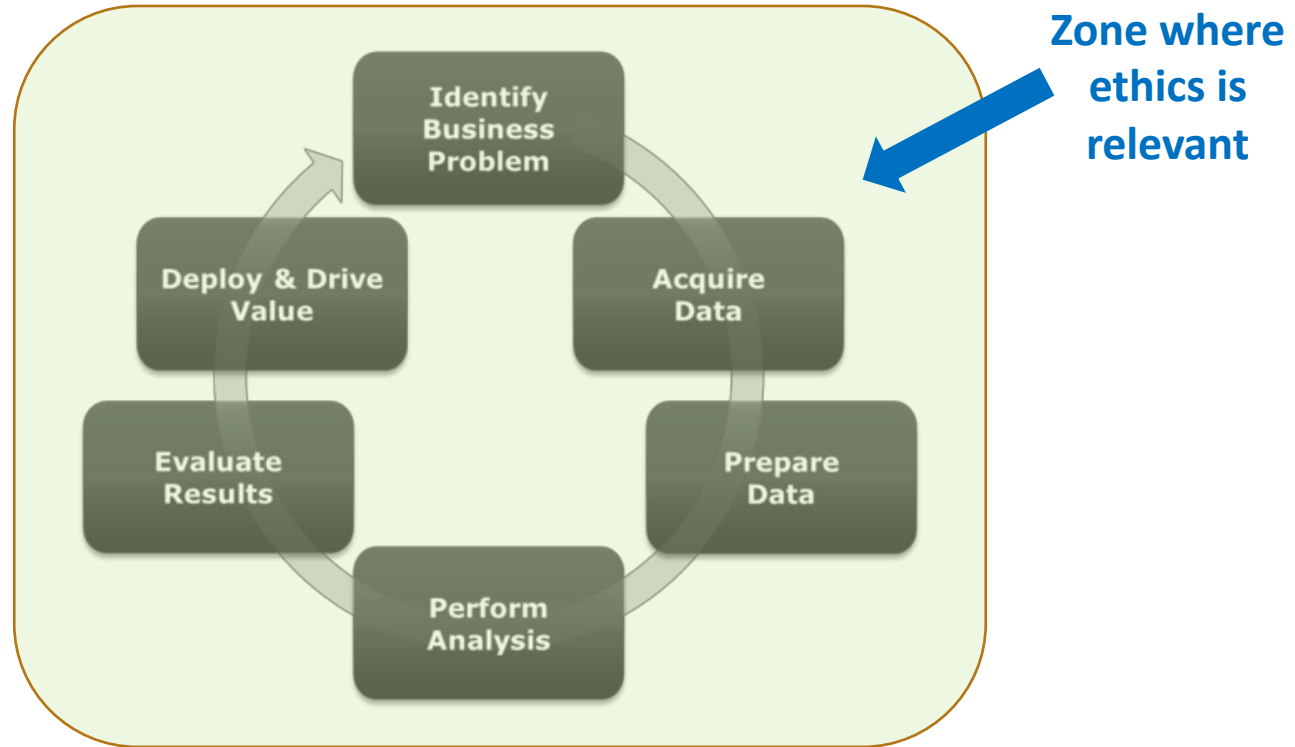
**REJECTED**

# GDPR Is Here ... And Expanding



# Where Does Ethics Need Consideration?

Everywhere!



A blue-tinted background image showing a business meeting. Several people are seated around a table, with their hands and arms visible. They are using various devices: a laptop, a tablet, and a smartphone. One person is holding a pen over a document. The overall scene suggests a collaborative work environment.

# Ethics Check Point #1: Model Targets / Business Problems

# Fair Or Foul?

Different organizations make different choices






# Three Critical Questions About Privacy Standards


A pregnant woman in a red dress is shown from the side, holding her belly with both hands. The image is dimly lit and serves as a background for the text.

1. What is legal?
2. What is ethical?
3. What will customers / consumers find acceptable?

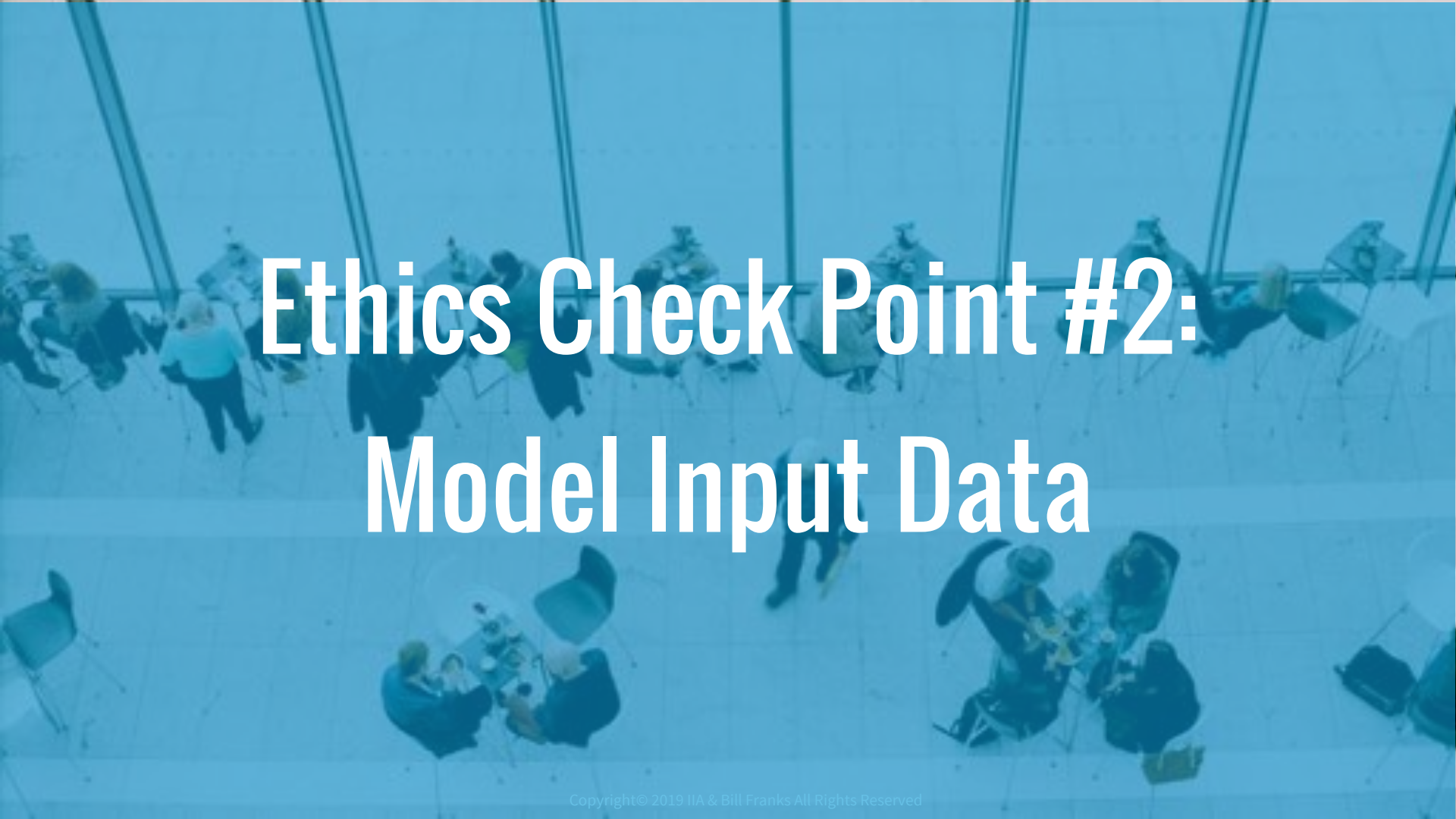
Ignore these questions at your own peril!

# The Ethics Of Censorship Algorithms



delete 





# Ethics Check Point #2: Model Input Data

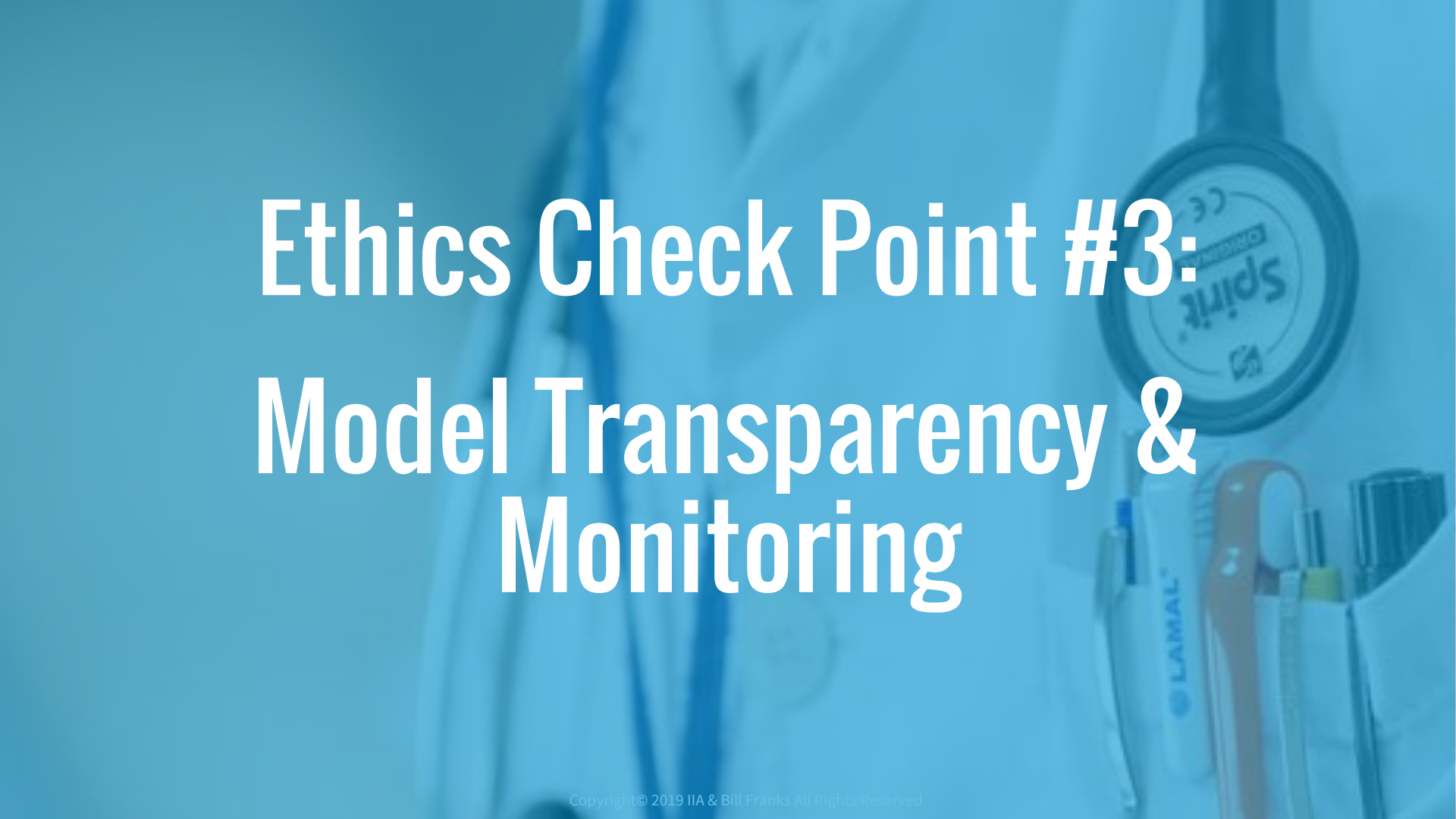
# A Core Bias Is That Models Use Past Data

Therefore, you get “as-is” versus  
“should-be” answers!



# Who Owns IoT Data?

Connected products make ownership less clear,  
leading to privacy and legal issues

The background of the slide is a blue-tinted photograph of medical equipment. A stethoscope is visible on the right side, with its chest piece showing the 'Spartan' brand logo. Below the stethoscope, there is a container holding various medical tools, including a pair of orange-handled scissors and a white marker with the 'LAMAL' brand name. The overall image is semi-transparent, allowing the text to be clearly visible.

# Ethics Check Point #3: Model Transparency & Monitoring

# AI's Unexplainability Can Lead To Odd Situations

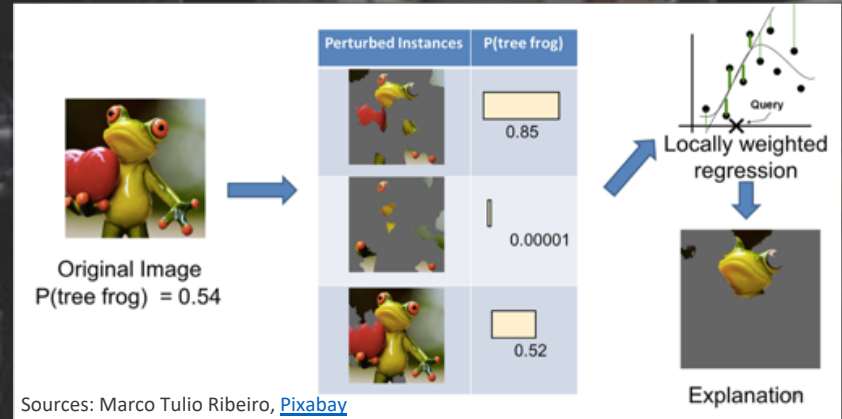


*“Does your car have any idea  
why my car pulled it over?”*

Source: The New Yorker



# What Happens Under The Hood?



There are ideas for making deep learning more transparent and understandable



# Extreme Care Is Required

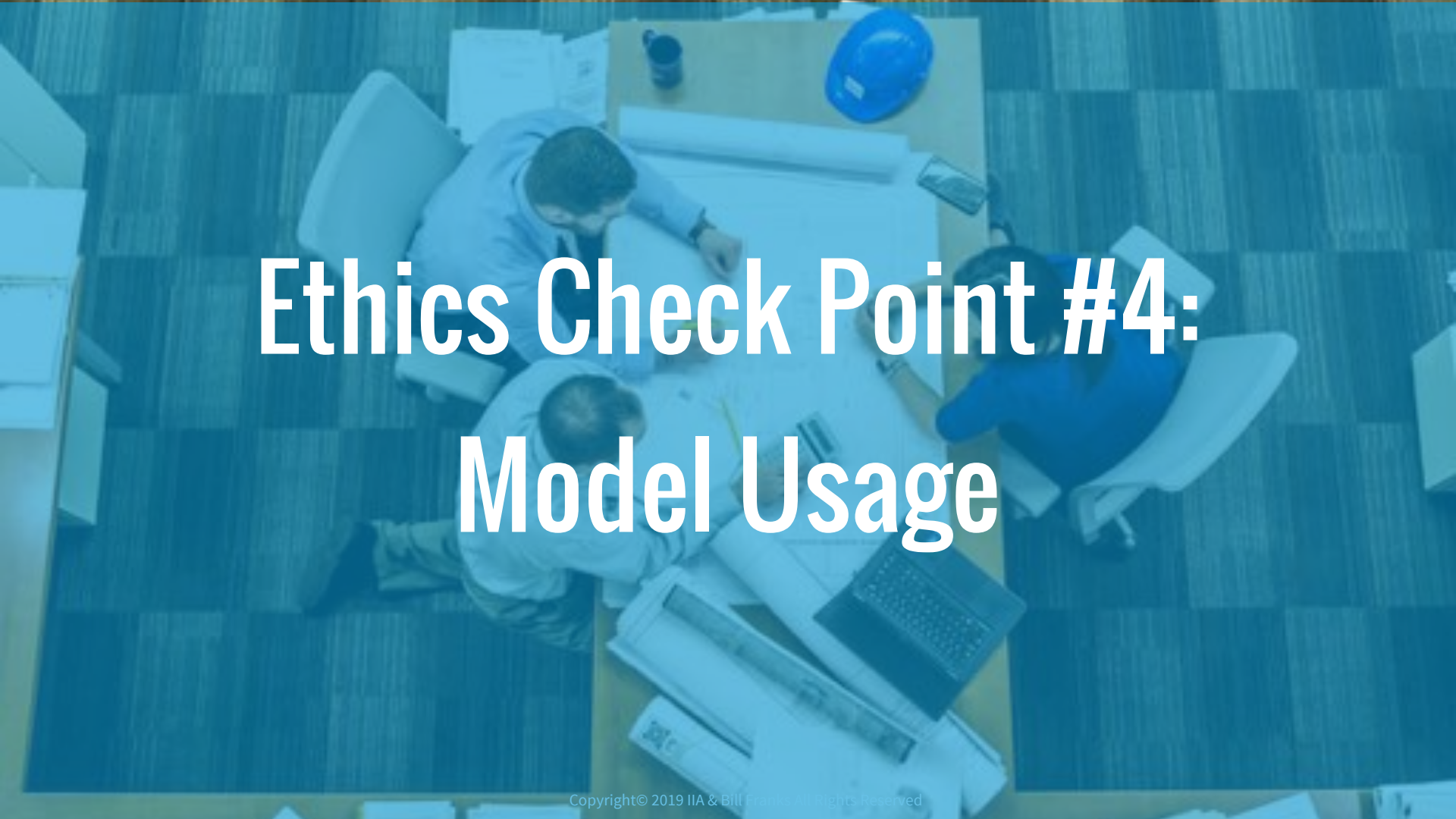
PRICE  
\$33.24

MAX PRICE  
\$41.72

With power comes responsibility and risk!!!

MAY 8 2010 > 14:15 - 15:15  
ACCENTURE

MIN PRICE  
\$0.01

An overhead view of three people sitting around a large wooden conference table in an office. The table is covered with various items including papers, a laptop, a blue hard hat, a blue cup, and a smartphone. The floor is covered with a blue and grey patterned carpet. The image has a blue tint.

# Ethics Check Point #4: Model Usage

# Context Is Critical!

Teaching AI models context may be the hardest part



# Don't Let Exceptions Drive The Rules

Focus on the net gains instead







# Ethics Check Point #5: Defining Policies

I Agree ☐

# Beware Of Privacy Catch-22's

The lack of legal and ethical clarity can lead to surprising decisions



# Organizations Must Take A Stand

Clarity is important!



# Five Check Points To Address Ethics

1

**Setting Model Targets / Business Problems**

2

**Model Input Data**

3

**Model Transparency & Monitoring**

4

**Model Usage**

5

**Defining Policies**

# Laws And Public Opinion Must Catch Up



# Set Up An Ethics Review Board





# The Analytics Community Must Take Ownership

Ethics is everyone's responsibility!



# Steps To Take Today

1

**Make ethics a priority**

2

**Set up an ethical review board**

3

**Develop written ethical guidelines & take violations seriously**

4

**Aim for transparency and fairness**

5

**Always put yourself in the shoes of those being analyzed!**



# Further Questions Or Comments?



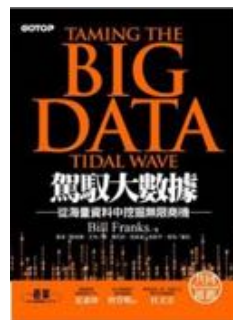
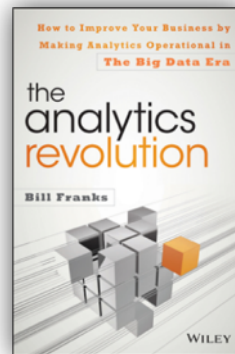
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# Rate today's session

**Cyberconflict: A new era of war, sabotage, and fear**

See passes & pricing

David Sanger (The New York Times)  
9:55am-10:10am Wednesday, March 27, 2019  
Location: Ballroom  
Secondary topics: Security and Privacy

**Rate This Session**

We're living in a new era of constant sabotage, misinformation, and fear, in which everyone is a target, and you're often the collateral damage in a growing conflict among states. From crippling infrastructure to sowing discord and doubt, cyber is now the weapon of choice for democracies, dictators, and terrorists.

David Sanger explains how the rise of cyberweapons has transformed geopolitics like nothing since the invention of the atomic bomb. Moving from the White House Situation Room to the dens of Chinese, Russian, North Korean, and Iranian hackers to the boardrooms of Silicon Valley, David reveals a world coming face-to-face with the perils of technological revolution—a conflict that the United States helped start when it began using cyberweapons against Iranian nuclear plants and North Korean missile launches. But now we find ourselves in a conflict we're uncertain how to control, as our adversaries exploit vulnerabilities in our hyperconnected nation and we struggle to figure out how to deter these complex, short-of-war attacks.

**David Sanger**  
The New York Times

David E. Sanger is the national security correspondent for the *New York Times* as well as a national security and political contributor for CNN and a frequent guest on *CBS This Morning*, *Face the Nation*, and many PBS shows.

Session page on conference website

✓ Attending Notes Remove

**Cyberconflict: A new era of war, sabotage, and fear**

9:55 AM - 10:10 AM, Wed, Mar 27, 2019

**Speakers**

David Sanger  
National Security Correspondent  
The New York Times

Ballroom

*Keynotes*

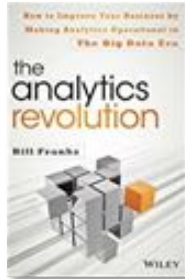
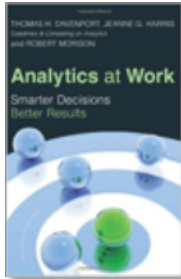
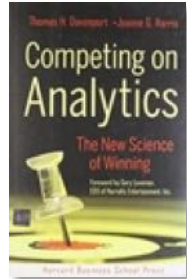
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**SESSION EVALUATION**

O'Reilly Events App

Founded in 2010 by Jack Phillips and Tom Davenport  
with the belief that . . .

- **Competing on analytics** is the future
- Success will be a **strategic** imperative, but **difficult** to achieve
- Success will require specialized and leveraged **expertise**



*Industry recognized  
foundational research from  
IIA's Tom Davenport, Robert  
Morison & Bill Franks*

Jack Phillips

CHIEF EXECUTIVE OFFICER  
Editor of *Enterprise Analytics*



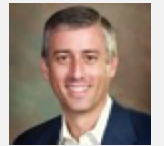
Tom Davenport

CO-FOUNDER, BOARD MEMBER, FACULTY  
Author of *Competing on Analytics*



Bill Franks

CHIEF ANALYTICS OFFICER  
Previous CAO Teradata  
Author *The Analytics Revolution*



Robert Morison

LEAD FACULTY  
Co-Author of *Analytics at Work*



# WHY IIA? SOLUTIONS FOR ANALYTICS SUCCESS

IIA helps **develop** and **sustain** enterprise analytics capabilities that drive performance and create competitive advantage

IIA focuses on the key levers of success and maximum return:

- ✓ *Access to Expertise*
- ✓ *Skills Development*
- ✓ *Measurement*

## The IIA Analytics Performance Suite

