

# Navigating the ethics of AI/ML

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## Agenda

- Introductions
- Basics of AI/ML
- Capabilities of AI/ML
  - ✓ The Good
  - ✓ The Bad
  - ✓ The Ugly
- How bias creeps in
- Strategies to address
- Call to Action
- Keeping up to date



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Director, Organizational  
Ethics & Compliance

COLLEEN DORSEY, JD

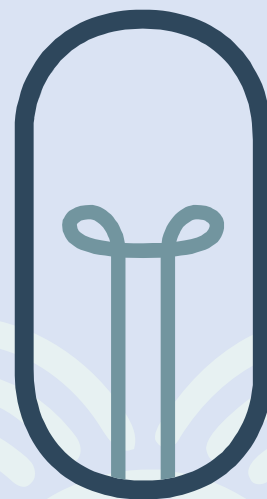
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LISA BETH LENTINI WALKER  
CEO & Founder

## COMPLIANCE ILLUMINATED

Strategic, Pragmatic and Effective  
Advice for Complex Times



LUMEN

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# BASICS OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING



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What is all  
the fuss  
about?

AI has been around  
since the 1930's

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3 reasons it's  
so prevalent  
today



***massive amounts of data***



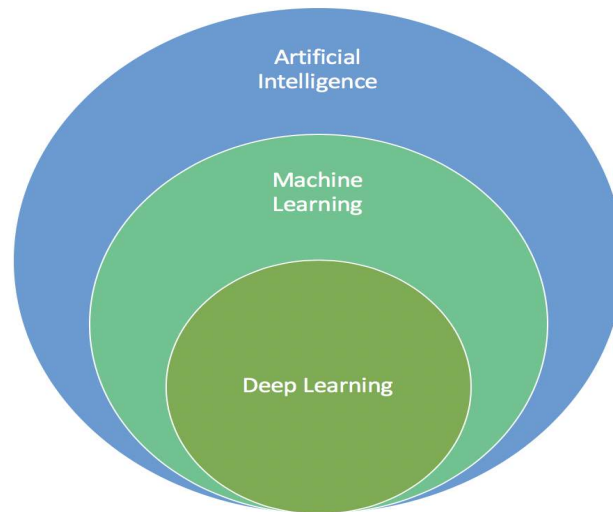
***computing power***



***sophisticated and breakthrough  
algorithms, tools and  
frameworks.***

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# AI, Machine Learning, Deep Learning



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## How is AI created?



Algorithms - a set of well-defined instructions in sequence to solve a particular problem.



Example of an algorithm to add two numbers entered by the user:

Step 1: Start  
Step 2: Declare variables num1, num2 and sum.  
Step 3: Read values num1 and num2.  
Step 4: Add num1 and num2 and assign the result to sum.



$sum \leftarrow num1 + num2$

Step 5: Display sum  
Step 6: Stop

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## How is ML created?

### Example: Canine Recognition Program

Inputs with corresponding outputs called TRAINING DATA is fed into a computer

The TRAINING DATA creates the algorithm that matches the inputs to the outputs.

With the results of that TRAINING DATA, we have a MODEL

With a MODEL, new inputs can be put into the model to get the outputs which are the computer's best guess at whether the image is a dog or not.

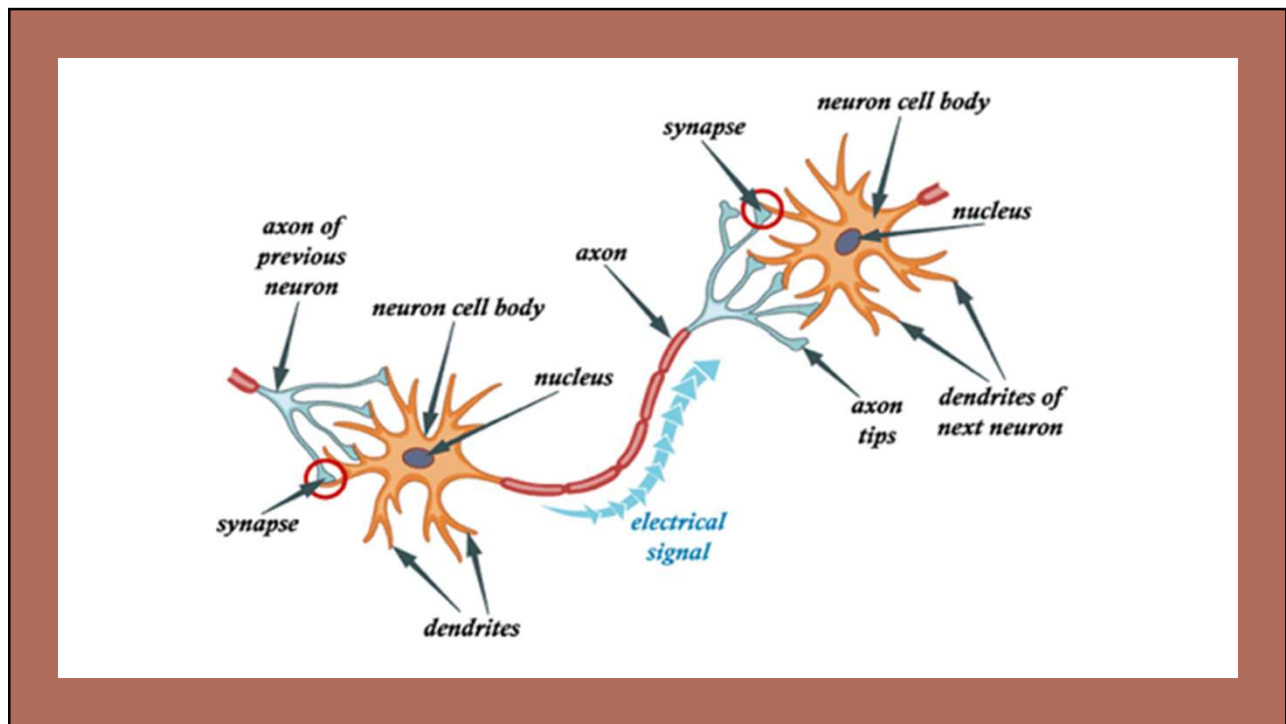
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## How advanced has AI become?

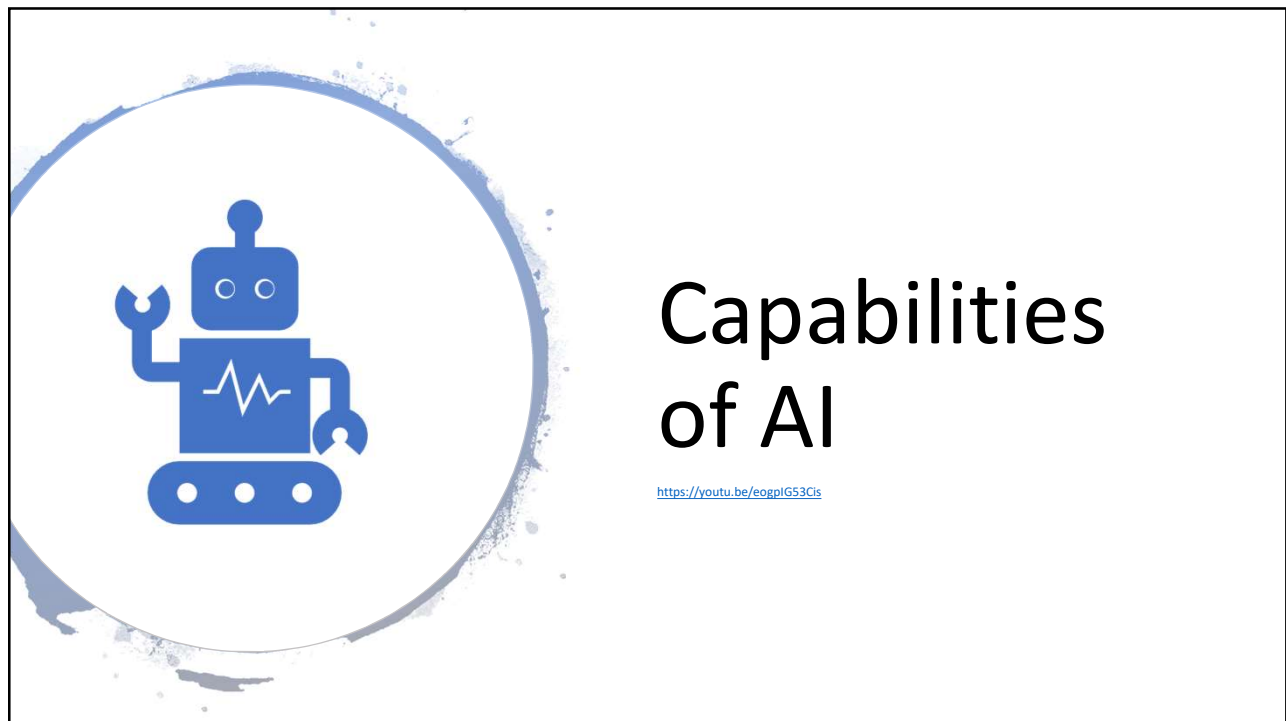
Linear algorithm – looks down a list one item at a time

Developers have created Artificial Neural Networks (ANN) that mimic how the human brain processes information

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## The Good – AI & Compliance

- AB InBev – Created BrewRIGHT, a AI platform that quickly reviews financial transactions across the globe for any potential illicit activity
- AI used in financial services industry to assist with money laundering and financial fraud

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## THE BAD



[https://www.vice.com/en\\_us/article/gkqwxp/that-viral-faceapp-is-making-everyone-look-whiter](https://www.vice.com/en_us/article/gkqwxp/that-viral-faceapp-is-making-everyone-look-whiter)

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# The Ugly



The New York Times

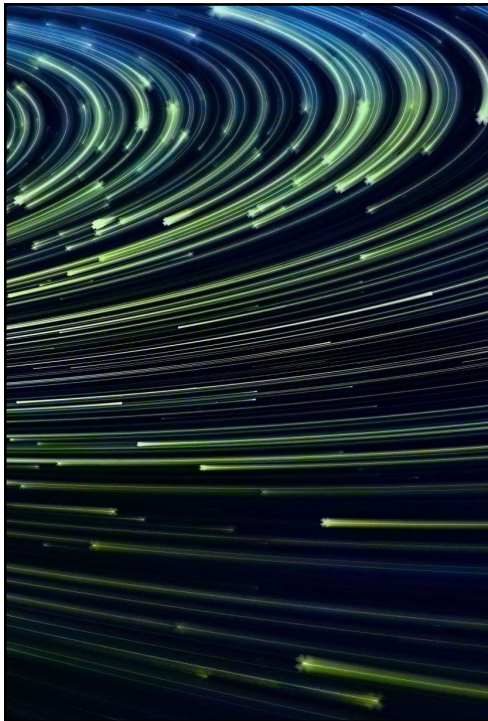
Account ▾

## The Secretive Company That Might End Privacy as We Know It

A little-known start-up helps law enforcement match photos of unknown people to their online images — and “might lead to a dystopian future or something,” a backer says.



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## How Bias Creeps in



BIAS IN  
DESIGN

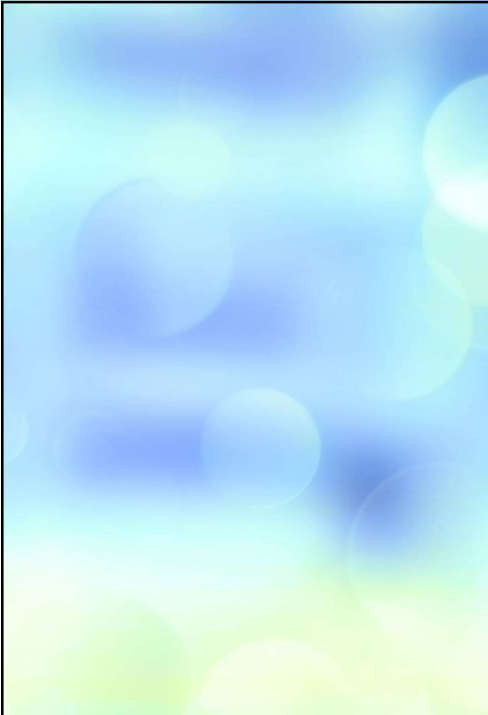


BIAS IN DATA








BIAS IN  
SELECTION

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## Strategies to Address Ethics and Bias

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-  Statistical Testing and Monitoring (“police the model”)
-  Quality Assurance Committee
-  Keep Clean from Information Security Threats
-  New Duties for the Chief Ethics/Compliance Officer
-  Training and Awareness

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## Call to Action

**Be proactive** in considering the **ethical implications of AI** and how it may impact your duties and responsibilities

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Keeping up  
to date...

- Govdocs – track ai  
legislation -

<https://www.congress.gov/search?q=%7B%22source%22%3A%22legislation%22%2C%22search%22%3A%22%5C%22Artificial%20intelligence%5C%22%22%7D&searchResultViewType=expanded>