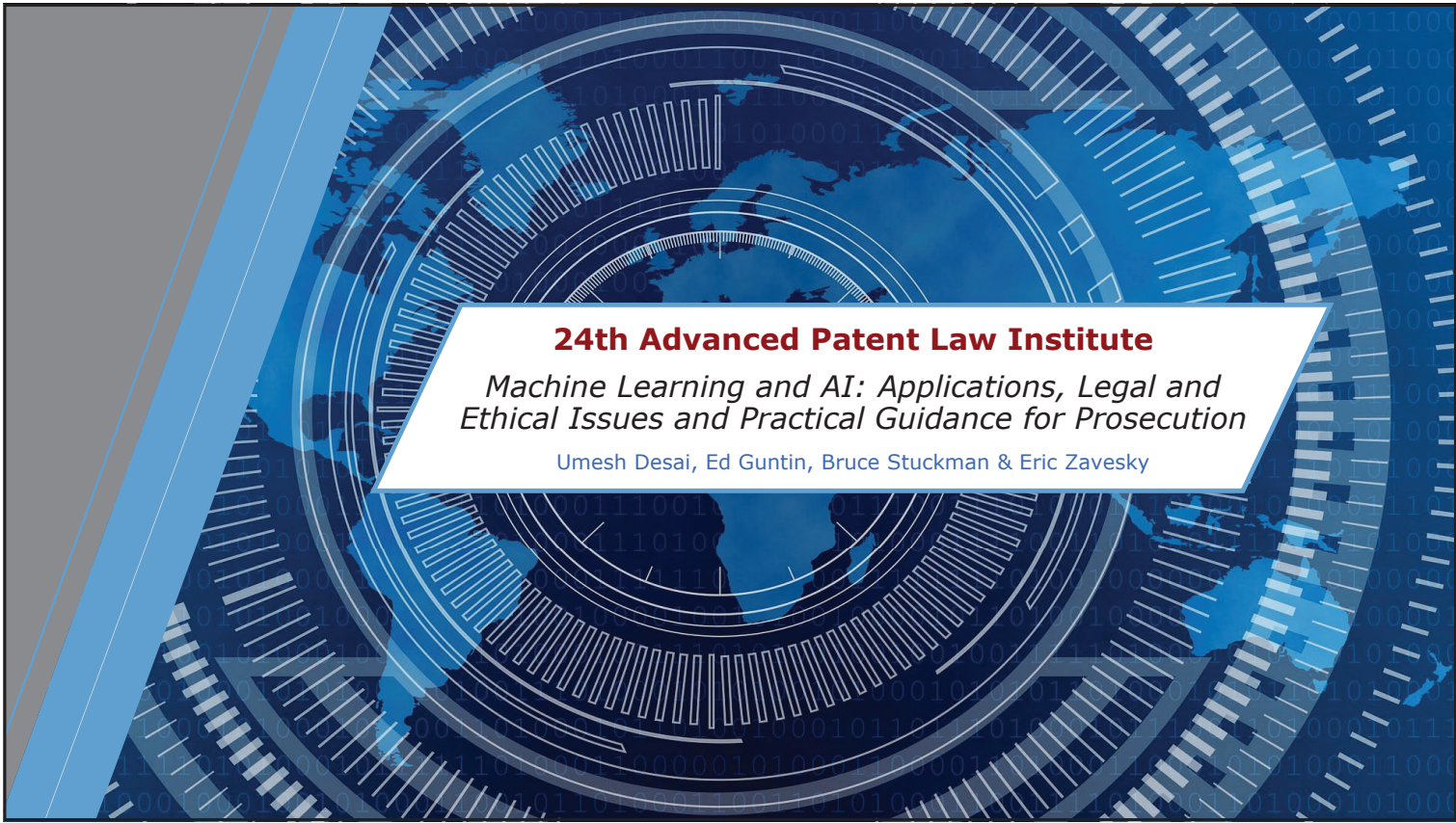




## **24th Advanced Patent Law Institute**

*Machine Learning and AI: Applications, Legal and  
Ethical Issues and Practical Guidance for Prosecution*

Umesh Desai, Ed Guntin, Bruce Stuckman & Eric Zavesky

1

## Disclaimer

The discussions presented are the views of the individual presenters and do not express the views or opinions of either their organizations or their clients.

2

2

# What is Artificial Intelligence?

A 5min primer.



3

3

## Progression of AI Architecture

### 1. Artificial Intelligence

Dartmouth workshop and competitive game playing algorithms. [1]

1956

1974

### 2. AI winter

Lack of progress, defunding

### 4. Supervised Machine Learning

Improved supervised learning: SVM classifier, regression, clustering [3]

1980s

1990s

### 3. Neural Networks

Convolutional neural networks for early computer vision [2]

### 6. Deep Neural Networks

Hidden layers, higher complexity, resource needs and performance [5, 6]

early 2000s

late 2000s

### 5. Unsupervised Machine Learning

Embedding, dimensionality reduction, feature discovery [4]

### 8. Trust Experiments

Explainability, deep fakes, and perception interrogation

2010s

today

### 7. Adversarial Networks

Two DNNs discover and exploit weakness for best model [7, 8]

4

4

Find the full text of this and thousands of other resources from leading experts in dozens of legal practice areas in the [UT Law CLE eLibrary \(utcle.org/elibrary\)](http://utcle.org/elibrary)

## Title search: Machine Learning and AI: Applications, Legal and Ethical Issues, and Practical Guidance for Prosecution

Also available as part of the eCourse

[Machine Learning and AI: Applications, Legal and Ethical Issues, and Practical Guidance for Prosecution](#)

First appeared as part of the conference materials for the  
24<sup>th</sup> Annual Advanced Patent Law Institute session

"Machine Learning and AI: Applications, Legal and Ethical Issues, and Practical Guidance for Prosecution"