AI and the Practice of Law

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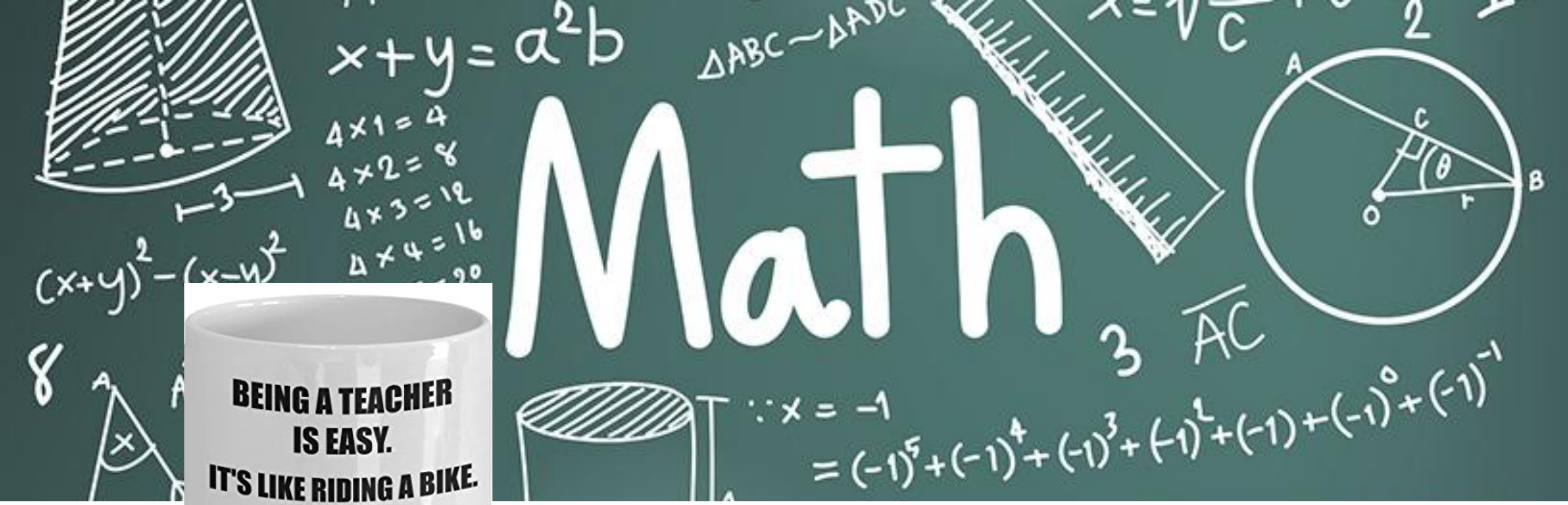
Ethical Obligation

Model Rule 1.1: A lawyer shall provide competent representation to a client. Competent representation requires the legal knowledge, skill, thoroughness and preparation reasonably necessary for the representation.

CMT 8: To maintain the requisite knowledge and skill, a lawyer should keep abreast of changes in the law and its practice, including the benefits and risks associated with relevant technology, engage in continuing study and education and comply with all continuing legal education requirements to which the lawyer is subject.



Law Students are Phobic About Maths

Lots of Attention in Recent Years

TECH

Why Hire a Lawyer When a Robot Will Do?

SEP 22, 2016 3:00 AM EDT

By Elaine Ou

BloombergView

How artificial intelligence is transforming the legal profession

POSTED APR 01, 2016 12:10 AM CDT

BY JULIE SOBOWALE

ABA JOURNAL

Dan Jansen, an entrepreneur with a background in advertising and media, came on board as the first CEO of NextLaw Labs. After years of making lawyer jokes to his wife, who worked as a corporate attorney, Jansen now has the job of transforming the legal profession.

"Law firms have historically had a pyramid structure. … If the work at the bottom of the pyramid is being automated, we want to own that technology and not be a victim of it." Dan Jansen.

FUTURE OF WORK

CNBC

Lawyers could be the next profession to be replaced by computers

Dan Mangan | @_DanMangan | Friday, 17 Feb 2017 | 1:55 PM ET

JULIA GREENBERG BUSINESS 02.08.16 10:00 AM

TECH WILL FORCE LAWYERS TO DO MORE FOR THOSE BILLABLE HOURS

WIRED

#LAW #SILICON VALLEY #STARTUPS #TECH

Not Everything is Quite so Dire

THE
NATIONAL LAW REVIEW

Artificial Intelligence – A Game Changer in the Legal Industry?

Wednesday, April 12, 2017

A.I. changes everything for law firms. Today's technology allows for contract review at a speed with which a lawyer simply cannot compete. The result is a faster and more accurate work product. Law firm clients get better results for less money.

Does AI mean that lawyers will go the way of the dinosaur? Hardly. What will change though, and sooner rather than later, is historically mundane and administrative legal work will be assigned to a computer, not an associate or paralegal.

In a recent CNBC article titled "*Lawyers could be the next profession to be replaced by computers*" author Dan Mangan stated "The legal profession — tradition-bound and labor-heavy — is on the cusp of a transformation in which artificial-intelligence platforms dramatically affect how legal work gets done." Automation won't replace the need for lawyers, it just re-allocates the work higher on the value chain. What seems inevitable is a shift from low level legal administration to high level technology development and management.

Big-Picture Goals

Rules of the Game

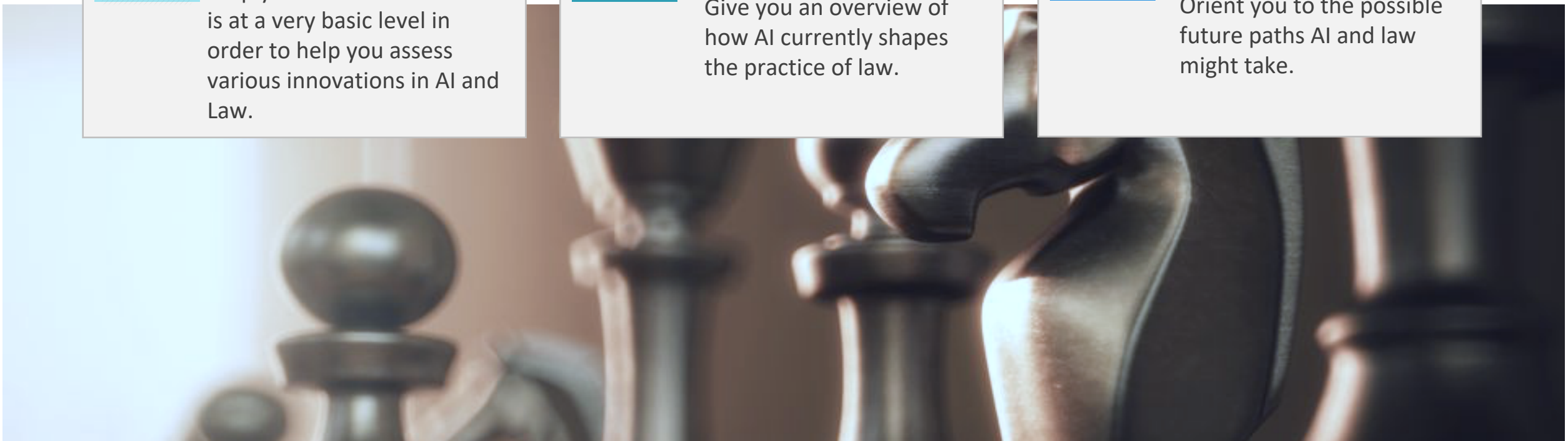
Help you understand what AI is at a very basic level in order to help you assess various innovations in AI and Law.

Current Uses

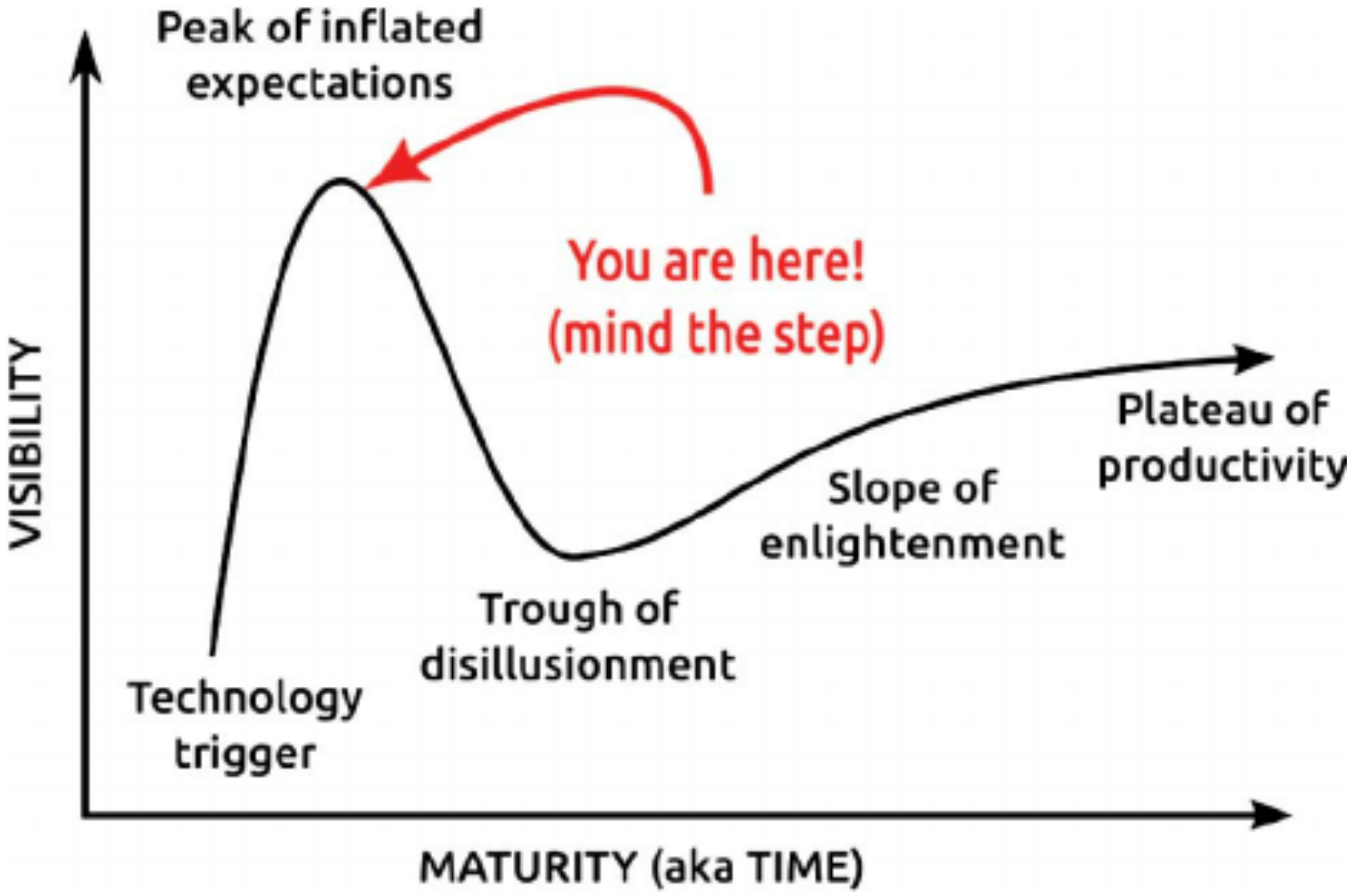
Give you an overview of how AI currently shapes the practice of law.

The Future

Orient you to the possible future paths AI and law might take.



Gartner Hype Cycle



The Basics of AI in General

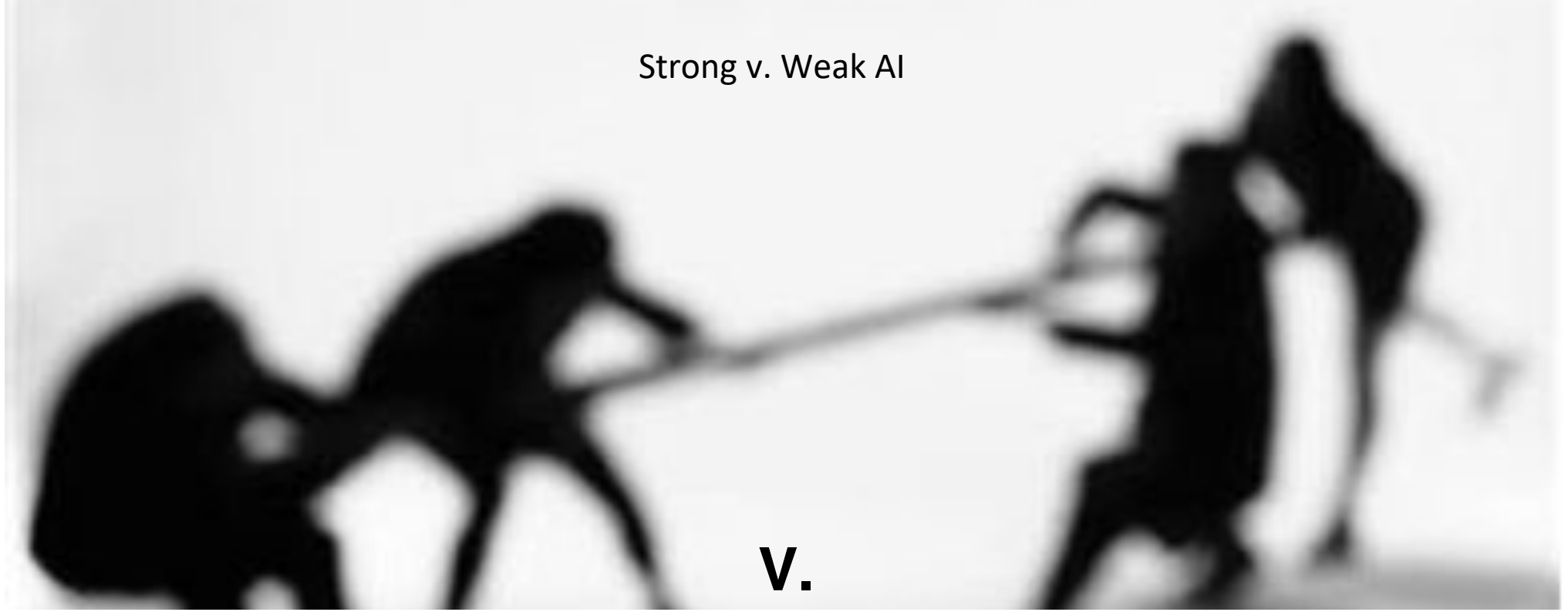
A Rough and Ready Definition of AI

1) Using computers or computation to solve problems or make automated decisions

2) For tasks that humans routinely do

3) And that we think of as requiring “intelligence.”

Strong v. Weak AI

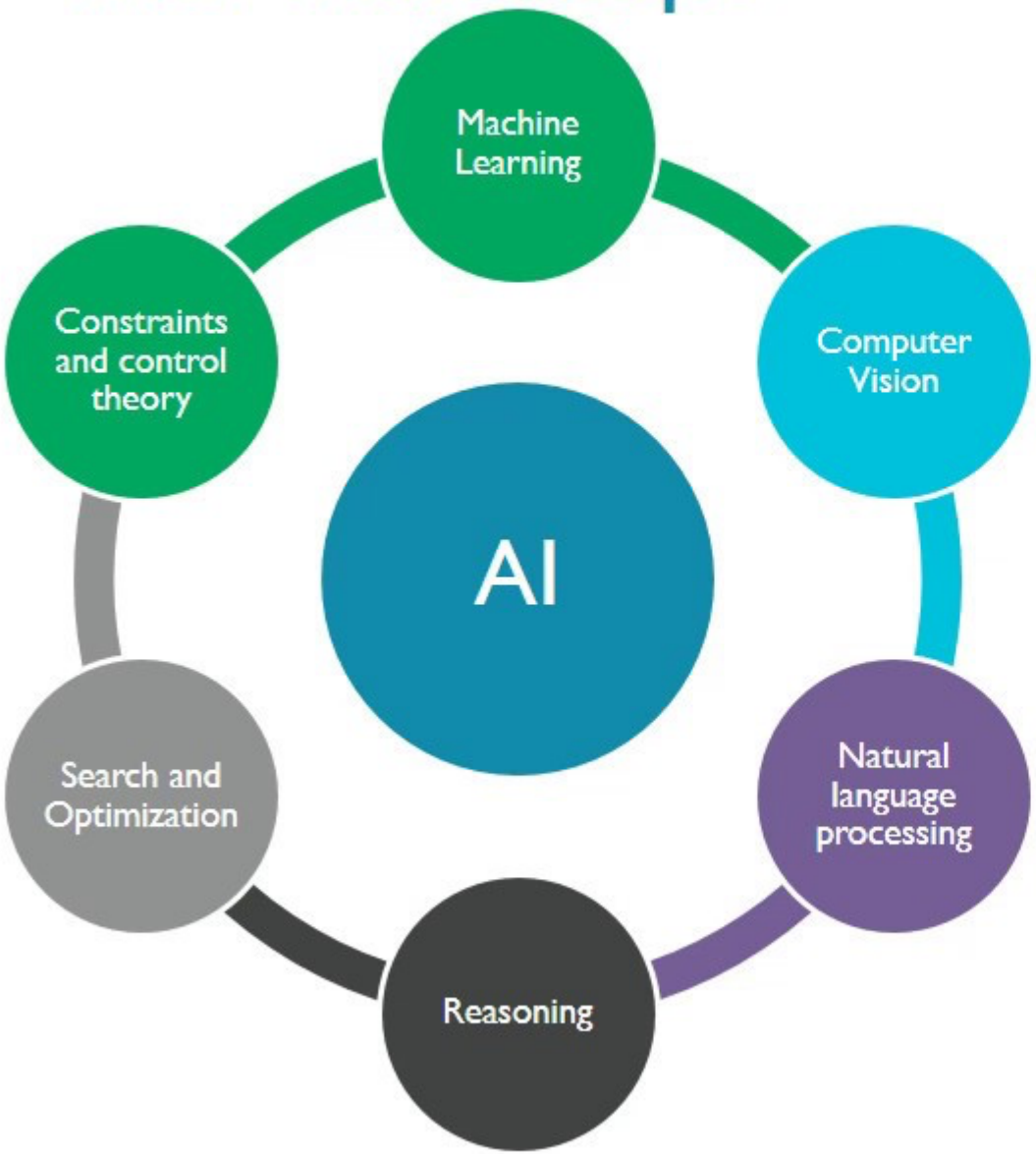


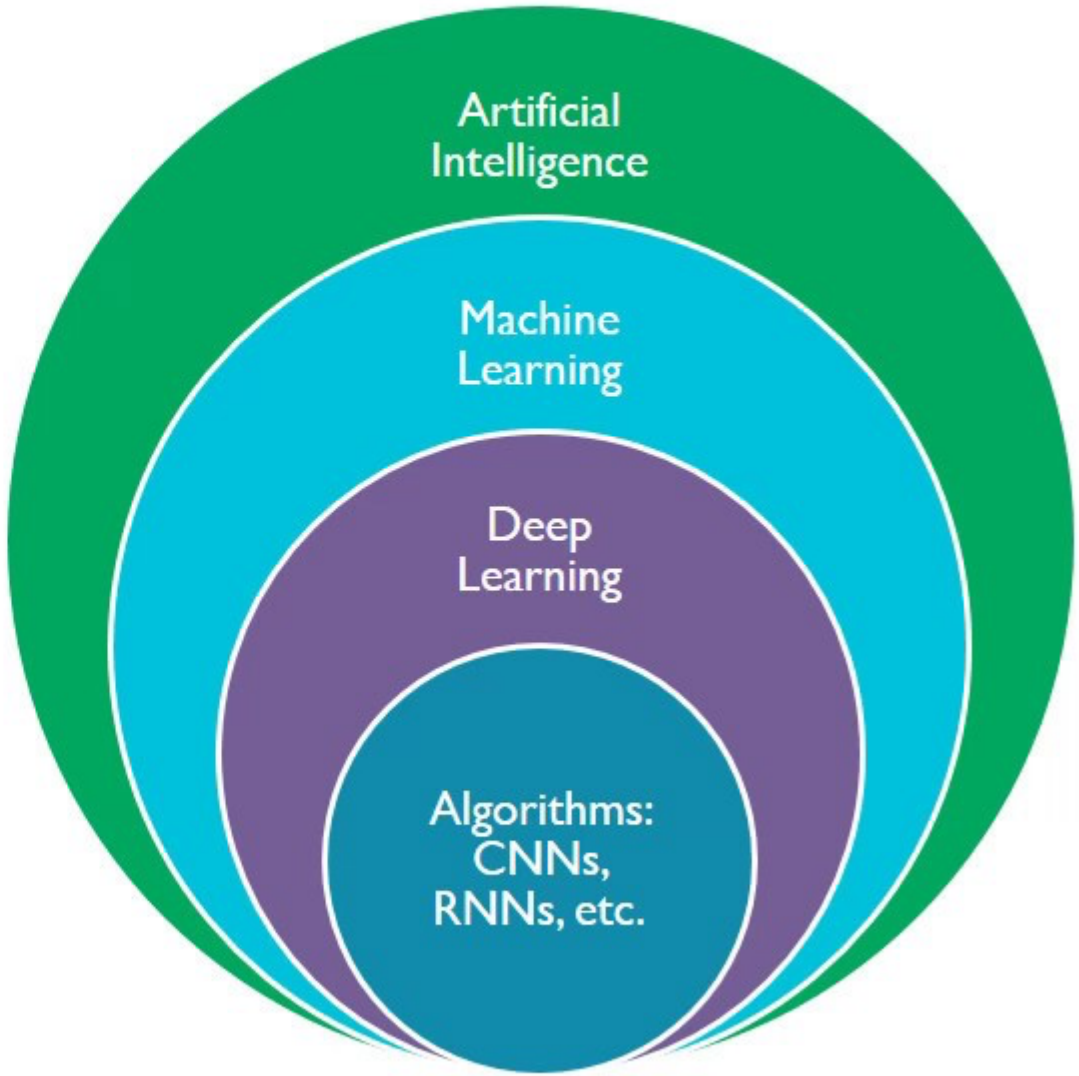
Strong AI might be described as computers resolving problems at a level commensurate with or surpassing humans. Strong AI might involve abstract reasoning or adductive thinking.

We have no real examples of this in practice, at least yet.

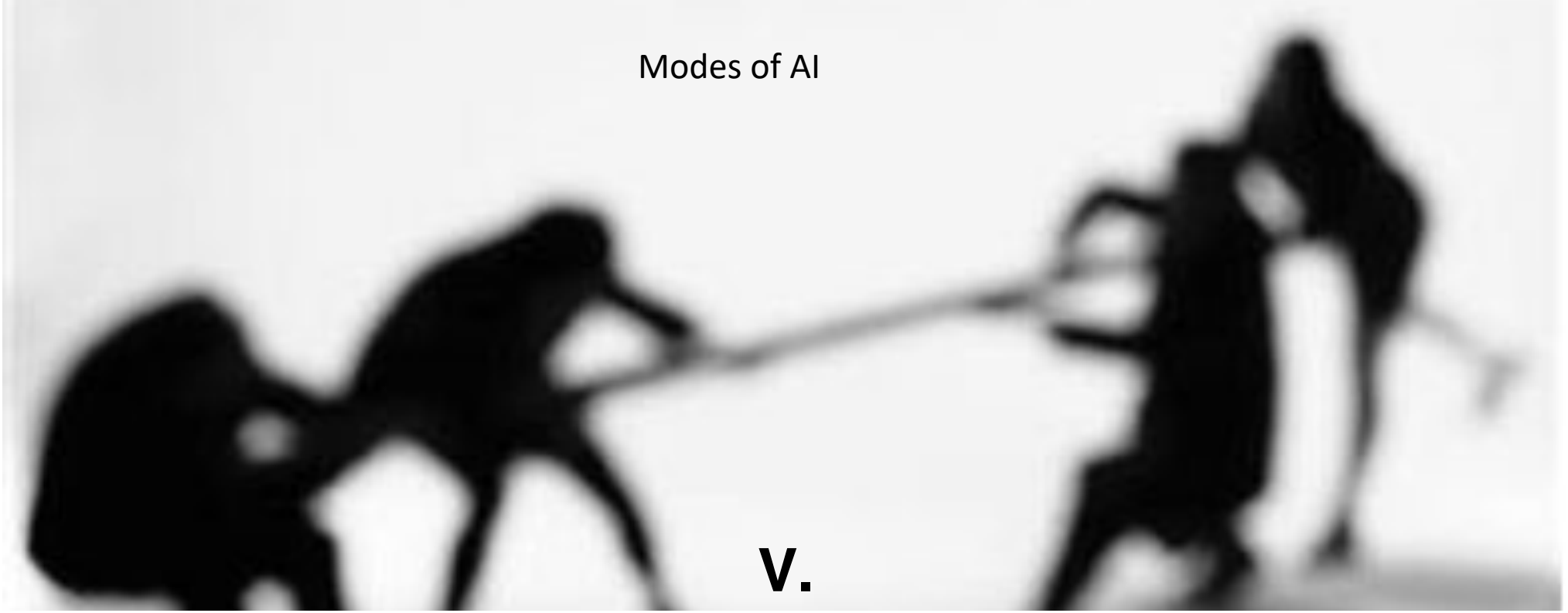
Weak AI amounts to computers solving problems by spotting patterns in data. This is almost all of the AI we currently see in the world.

The AI landscape





Modes of AI



V.

Logic and rule-based pattern recognition.

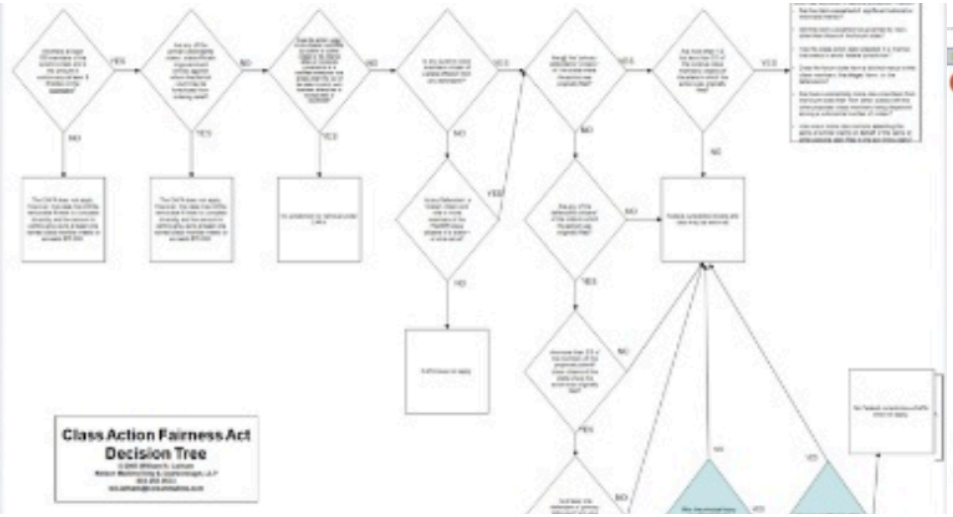
“Algorithmic” pattern recognition.

Think Boolean searches.

Big-Data-driven pattern recognition.

Machine learning.

Plenty of Examples of Rule-Based AI in Law



Future Potential?

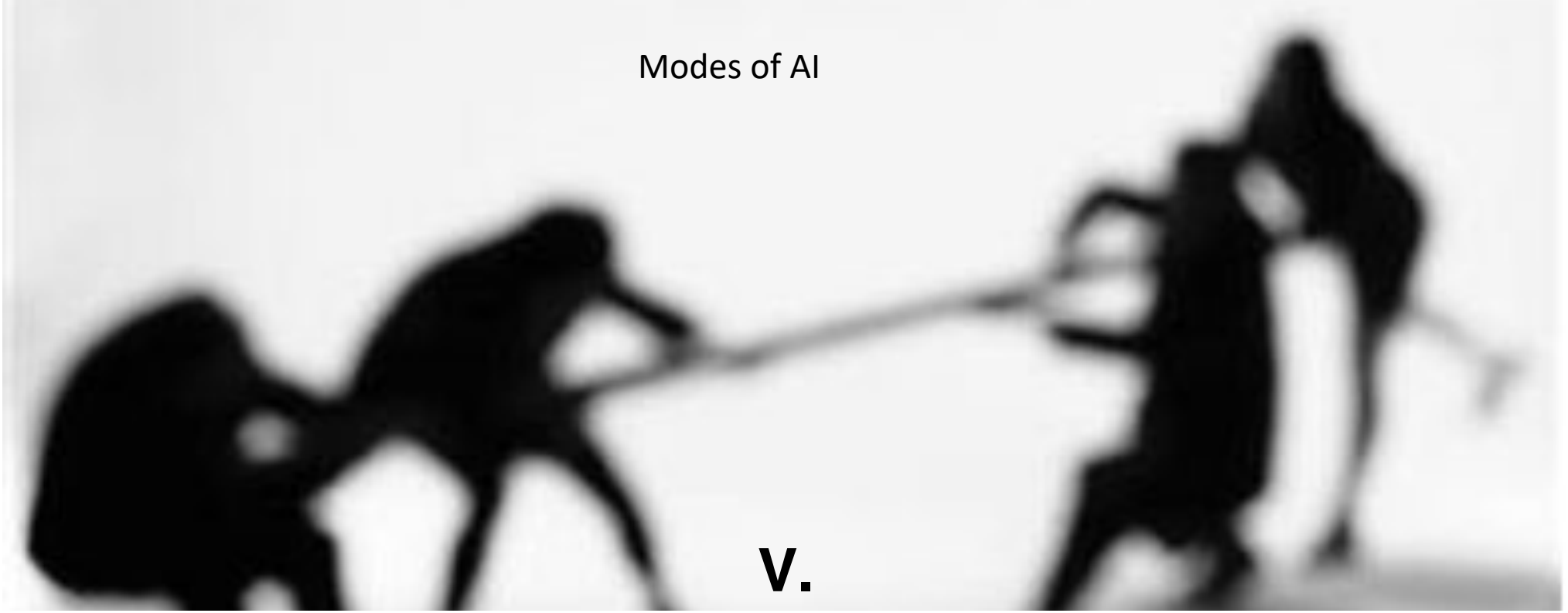
1) Client intake — guided questions that follow a simple algorithm and become tailored to each client's case and needs ("Chatbots")

2) Client updates and communication — portals allowing clients not only to access raw updates, but allowing clients to explore their case through guided investigations and analysis ("Chatbots")

3) More robust self-help options, allowing clients with simple matters to generate their own legal documents and solutions

4) Online dispute resolution platforms — several states are already experimenting with this. Alaska has said that it wants to eventually move 100% of civil cases with less that $50k at stake to online resolution.

Modes of AI



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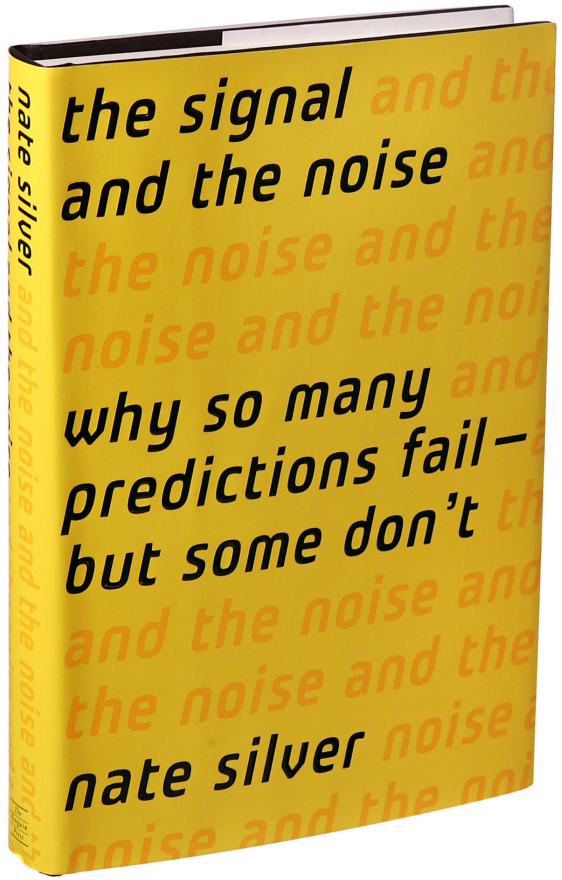
Problem is . . .

It's All About Recognizing Patterns

- And it turns out, humans just aren't particularly good at that, at least in many domains.
- Experts turn out to not necessarily be so good at predicting things, at least in the aggregate.
    - Predicting Supreme Court outcomes, for instance — 2002-03 term, Theodore W. Ruger and several collaborators conducted an experiment, pitting a panel of distinguished SCOTUS experts against a very, very rudimentary algorithm.

	Case-Level	Justice-Level
Experts	59%	67.4%
Algorithm	75%	66.7%

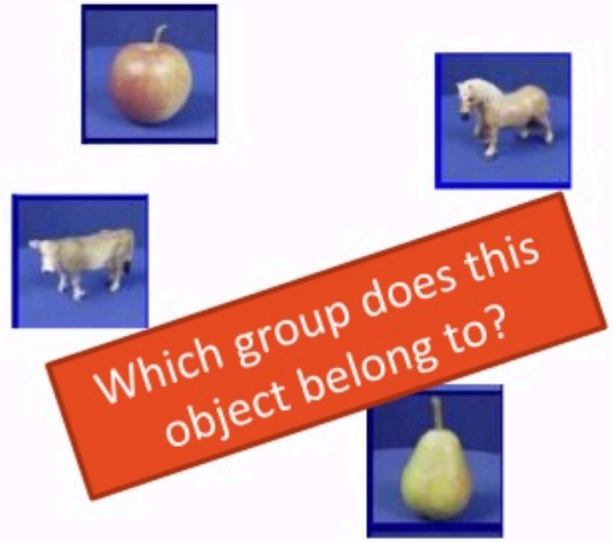
Noise Instead of the Signal

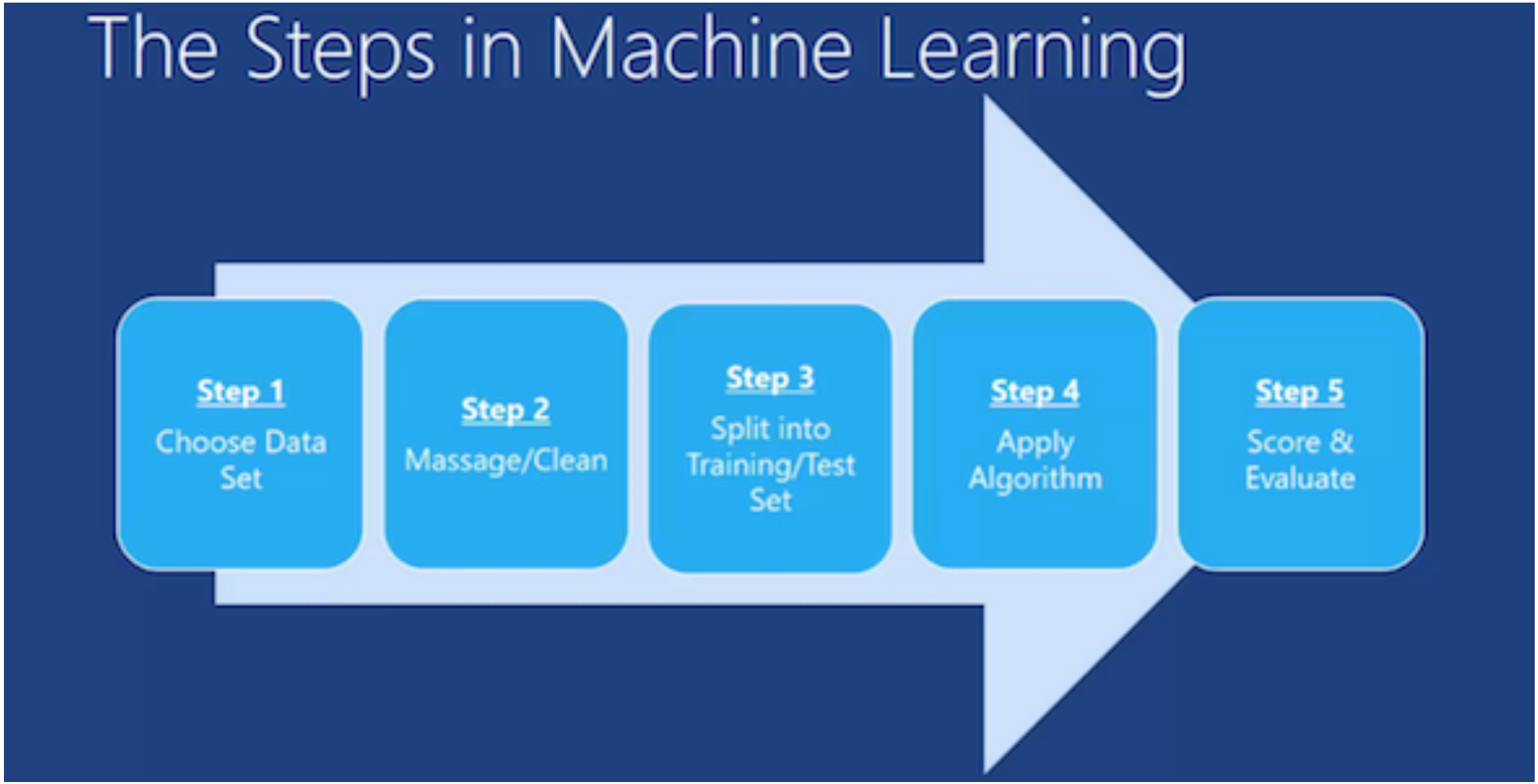


Self-Driving

Machine Learning

The Learning




The Steps in Machine Learning
Step 1
Choose Data Set
Step 2
Massage/Clean
Step 3
Split into Training/Test Set
Step 4
Apply Algorithm
Step 5
Score & Evaluate

Examples of Machine Learning in Practice

Predictive Coding Steps

1

Seed Sets

Reviewers pull a representative cross-section of documents, known as a "seed set," from the full population of documents that need to be reviewed.

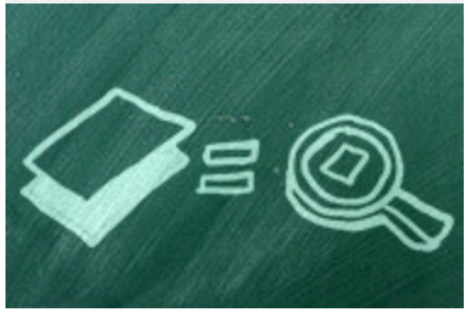
2

Responsive or unresponsive

Reviewers code (label) each document in the seed set as responsive or unresponsive and input those results into the predictive coding software.

Predictive Coding Steps

3



Predictive formula generated

The software analyzes the seed set and creates an internal algorithm (formula) for predicting the responsiveness of future documents.

4

Sample and refine

Users sample the results of the algorithm on additional documents and refine the algorithm by continually coding and inputting sample documents until they achieve desired results.

Predictive Coding Steps

5

Complete review

The software applies that algorithm to the entire review set and codes all remaining documents as responsive or unresponsive.

Other Legal Uses

Examiner Reports — Allows patent prosecutors to use the power of big data to predict what a specific examiner will do.

Drafting — Allows a drafter to increase the probability that a patent will be assigned a low-allowance class (reducing costs)

Business analytics — comparing your patents to your competitors

Other Legal Uses

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Legal spending analytics — helping clients (and attorneys) understand how litigation fees can be conserved and how time is being used on particular cases

Negotiation analytics — helping parties estimate the value of their disputes and see opportunities for settlement

Litigation Prediction — helping clients and attorneys gain insights about particular judges and courts in order to make higher quality predictions about outcomes

Compliance Prediction — spotting potentially concerning or rogue behaviors so that compliance resources can be most effectively utilized

Contract drafting — going beyond simple analysis to helping clients design their deals to maximize contractual surplus

The Future?