Coming Soon to A Courtroom Near You: How Artificial Intelligence Will Disrupt the Substance and Process of Law

20th Annual D. Brook Bartlett Lectures
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Gary Marchant, Ph.D., J.D .
gary.marchant@asu.edu

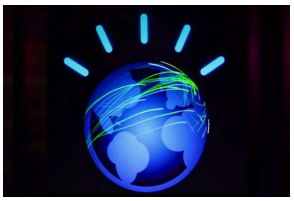
CENTER FOR Law, Science & Innovation

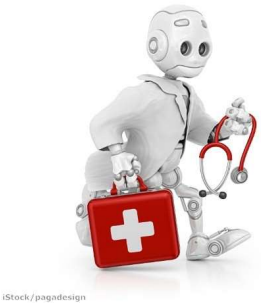
ASU Sandra Day O'Connor College of Law
ARIZONA STATE UNIVERSITY

Innovating law, policy and ethics for science & technology

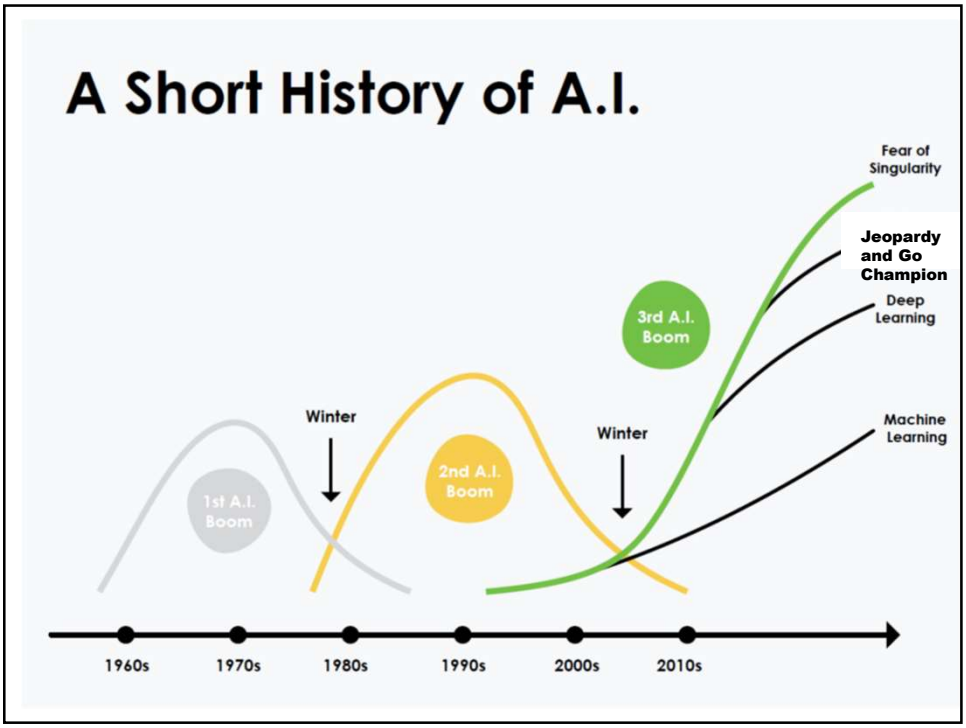
What is AI?

- A machine that displays intelligent behavior, such as reasoning, learning and sensory processing.
- AI involves tasks that have historically been limited to humans and intelligent animals, such as decision-making and problem-solving.
- Two types:
  - Narrow AI
  - Artificial General Intelligence (AGI)

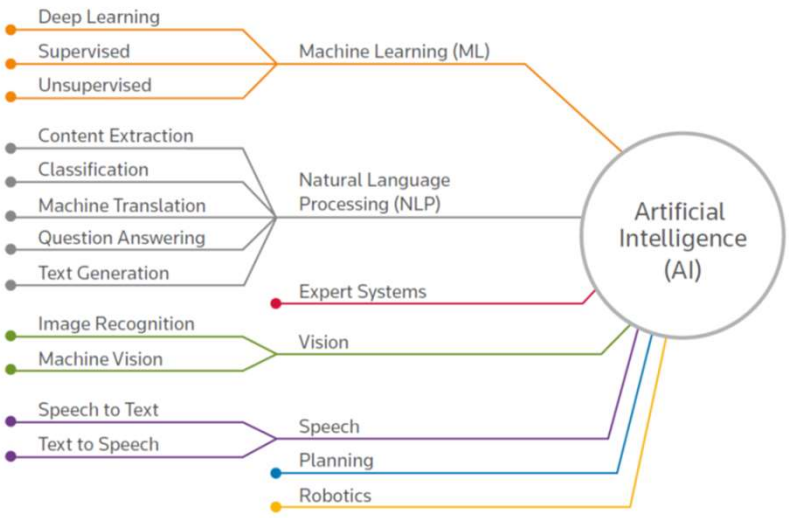




iStock/pagadesign



Components of Artificial Intelligence



AI: Machine Learning

Human Computer Programming		Machine Learning
▪ Machine mechanically implements human-made code	→	▪ Humans provide data and specify overall goal for machine
▪ Bad outcomes are attributable to bad code	→	▪ Machine self-learns and adapts its approach to maximize specified goal
▪ Human programmer can explain why machine did what it did	→	▪ Limited explanation for why machine did what it did

AI Component: Machine Learning

How Google's AlphaGo Beat a Go World Champion

Inside a man-versus-machine showdown

CHRISTOPHER MOYER | MAR 28, 2016 | TECHNOLOGY

Source: The Atlantic

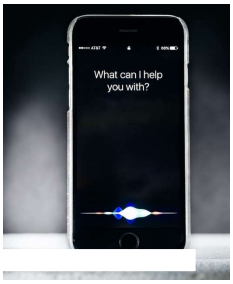
AlphaGo Zero: Google DeepMind supercomputer learns 3,000 years of human knowledge in 40 days

Chinese Go player Ke Jie competes against Google's artificial intelligence (AI) program, AlphaGo

CREDIT: IMAGINECHINA/REX/SHUTTERSTOCK

Source: The Telegraph

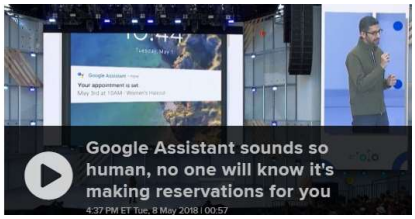
AI Component: Speech Recognition



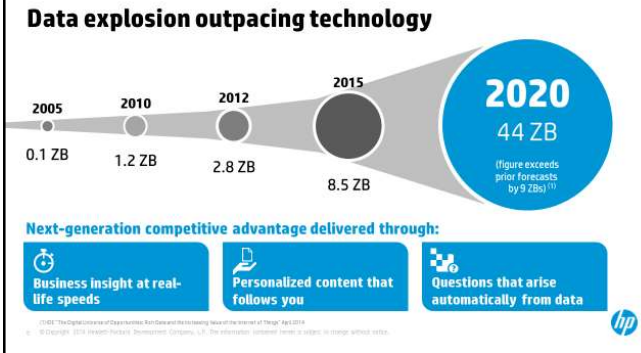
AI Component: Vision

AI Component:
Natural Language Processing

Google's Assistant is getting so smart it can place phone calls and humans think it's real

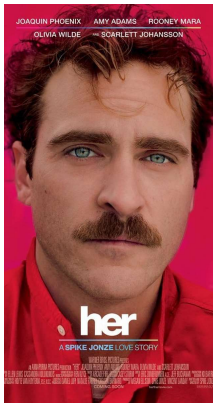


AI Component:
Big Data

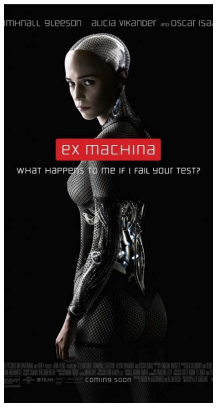


AI Can Be in Two Formats

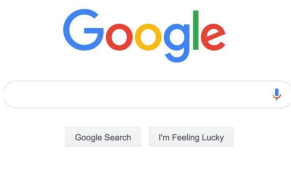
Online – AI as a software program

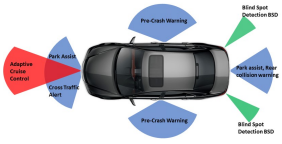


Robots – AI integrated into a physical "body"



AI Is Already Ubiquitous in Our Lives



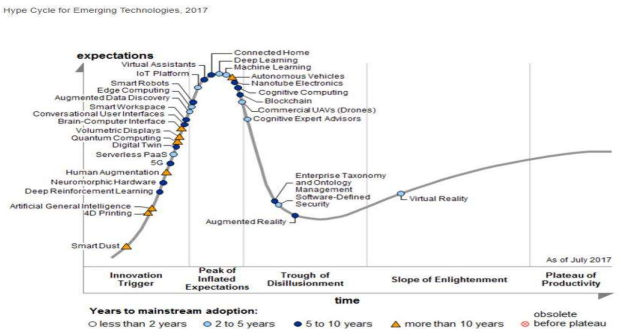


“Artificial Intelligence is the New Electricity”
- Andrew Ng

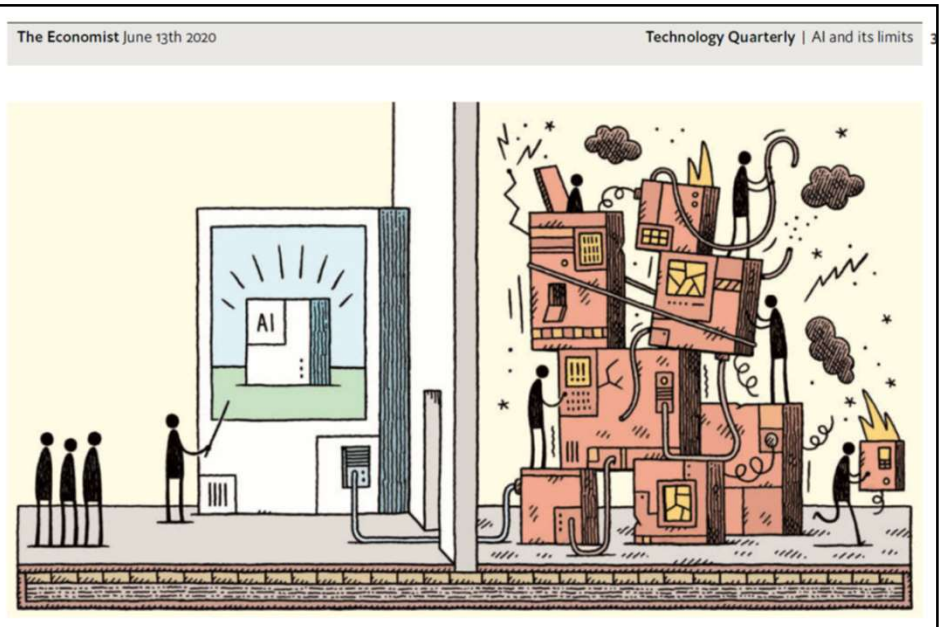
(former Baidu Chief Scientist, Coursera co-founder, and Stanford Adjunct Professor)

AI Problems & Challenges

hype


Hype Cycle for Emerging Technologies, 2017
expectations
Virtual Assistants
IoT Platform
Smart Robots
Edge Computing
Augmented Data Discovery
Smart Workspace
Conversational User Interfaces
Brain-Computer Interface
Volumetric Displays
Quantum Computing
Digital Twin
Serverless PaaS
5G
Human Augmentation
Neuromorphic Hardware
Deep Reinforcement Learning
Artificial General Intelligence
4D Printing
Smart Dust
Connected Home
Deep Learning
Machine Learning
Autonomous Vehicles
Nanotube Electronics
Cognitive Computing
Blockchain
Commercial UAVs (Drones)
Cognitive Expert Advisors
Enterprise Taxonomy and Ontology Management
Software-Defined Security
Augmented Reality
Virtual Reality
As of July 2017
Innovation Trigger
Peak of Inflated Expectations
Trough of Disillusionment
Slope of Enlightenment
Plateau of Productivity
time
Years to mainstream adoption:
less than 2 years
2 to 5 years
5 to 10 years
more than 10 years
obsolete before plateau
Note: PaaS = platform as a service; UAVs = unmanned aerial vehicles
Source: Gartner (July 2017)


INDEPENDENT
'Russia's most modern robot' revealed to be just a person in a suit
Onlookers immediately notice a series of things wrong with the robot
Andrew Griffin | Wednesday 12 December 2018 | 15:33


The Economist June 13th 2020
Technology Quarterly | AI and its limits
AI
Artificial intelligence and its limits
Reality check

lack of common sense

Beothurtreed Tuna Pie

pastries, fruits, pork

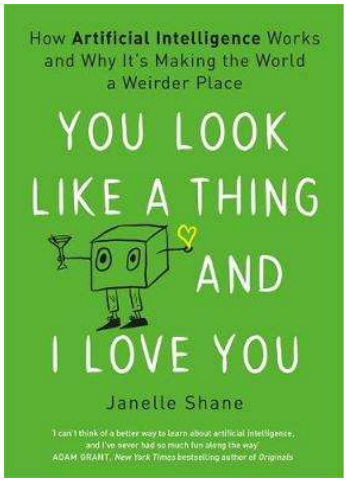
1 hard cooked apple mayonnaise
1 onion
3 tablespoon butter
5 cup lumps; thinly sliced
¼ cup chicken broth
1 carrot, spinach (vanilla estach w/pecans)
1 freshly ground black pepper - optional

Surround with 1 ½ dozen heavy water by high, and drain & cut into ¼ in. remaining the skillet.

Pour liquid into thin baking pan.

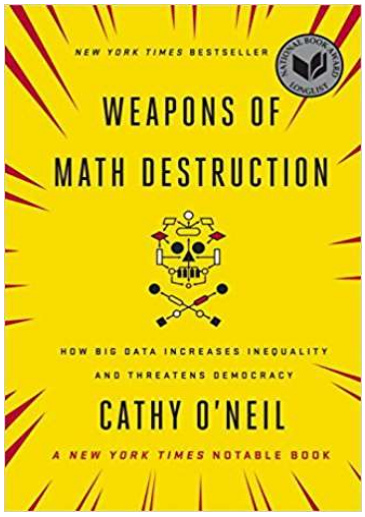
Combine lime juice, lime juice, finely grated cheese and water in a small saucepan and reduce heat. Cover and simmer about 20 minutes at medium-high speed until thickened.

Yield: 4 servings

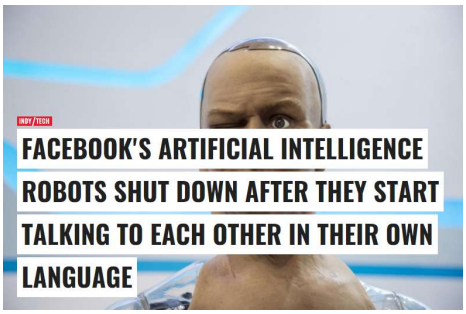


http://lewisandquark.tumblr.com/post/163878889437/try-these-neural-network-generated-recipes-at-your

bias

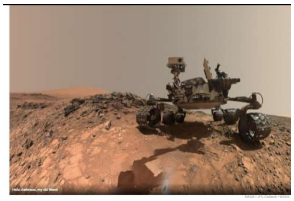


transparency



privacy

anthorpormophism

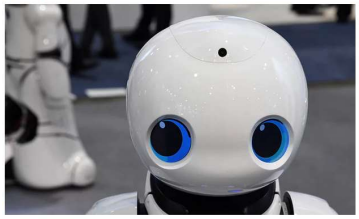


Why the Curiosity Rover Stopped Singing 'Happy Birthday' to Itself

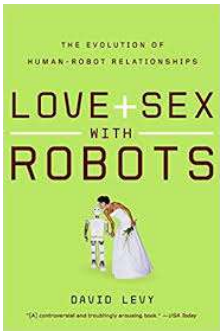
The answer, a NASA engineer warned, "will sound rather cold and unfeeling."

Give robots 'personhood' status, EU committee argues

Proposed rules for robots and AI in Europe include a push for a general basic income for humans, and 'human rights' for robots



https://www.youtube.com/watch?v=jU-cori12KU



AI and Law:
Three Types of Applications

1. **Substantive Oversight of AI**
2. **AI as Evidence**
3. **AI in the Practice of Law**

1. Substantive Oversight of AI

Question:

When an AI system causes harm, how and to whom do we allocate legal responsibility?

A Robot That Bought Drugs Online Is Now Free From Police Custody

Posted Apr 20, 2015 by John Biggs (@johnbiggs)

If that headline doesn't make much sense, welcome to the 21st century when a program designed to automatically buy random items from illegal marketplaces can be arrested by Swiss police. As you'll recall, Swiss police seized a program called Darknet Shopper, a bot that visited darknet markets and bought random items with bitcoin. Most of the items were mundane – counterfeit goods and the like – but the robot also ordered some ecstasy.

TC NEWSLETTER

The Daily Crunch
Our top headlines
Delivered daily

TC Week Review
Top stori the week
Delivered

CrunchBase Daily
The latest startup funding announcements
Delivered daily

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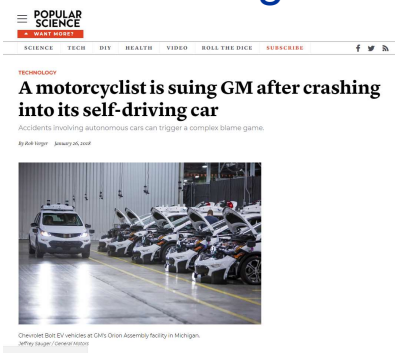
LATEST CRUNCH REPOR

Other (Not So) Hypothetical Scenarios

Autonomous car mistakes white panel semitrailer for sky; crashes into it and kills passenger

Autonomous Vehicle Liability: Framing Case?



POPULAR SCIENCE

SCIENCE TECH DIY HEALTH VIDEO ROLL THE DICE SUBSCRIBE

TECHNOLOGY

A motorcyclist is suing GM after crashing into its self-driving car

Accidents involving autonomous cars can trigger a complex blame game.

By Rob Verger January 26, 2018

Chevrolet Bolt EV vehicles at GM's Orion Assembly facility in Michigan.
Jeffrey Sauger / General Motors

—

GM settles with motorcyclist over accident with self-driving Bolt

The motorcyclist reported shoulder and neck injuries.

- Why did motorcyclist sue GM when police report said he was at fault?
- Would motorcyclist have sued car or its driver if human-driven vehicle?
- Why did GM settle on terms that plaintiff described as "very satisfactory"?

A bot released onto social media to provide public service messages inexplicably libels a person.

A military autonomous weapon mistakes a commercial airplane for an attacker and destroys the plane.

Biased algorithm leads to arrest of an innocent person for a crime he did not commit

Medical AI system accidently gives patient lethal dose of medicine

Government algorithm falsely accuses thousands of citizens receiving government benefits of fraud, resulting in damaged credit, lost jobs and homes, and bankruptcies

NEWS & FEATURES

Government's Use of Algorithm Serves Up False Fraud Charges

Using a flawed automated system, Michigan falsely charged thousands with unemployment fraud and took millions from them.

Visual: Frankie Schembri

Bots from several different competitors secretly communicate and collude to raise prices and profits

What liability for the artificial intelligence that loses a fortune?

The claim brought for the amount lost by an AI is leading to major discussions on who is lable for it

Giulio Coraggio · May 16, 2019

The first case involving an artificial intelligence system that lost a large amount of money investing in the stock exchange market raises the question of what liability regime shall apply to the conduct and misconduct of an AI.

Source: GamingTechLaw.com

A "smart" workplace robot unexpectedly reaches over and crushes a human worker's head

WorldViews

A robot killed a factory worker in Germany. So who should go on trial?

By Rick Noack
July 2, 2015

BERLIN — Prosecutors are leading an unusual investigation after a robot killed a contractor at a Volkswagen production plant in western Germany on Monday.

So who should be liable?

Historically we have held operator of autonomous system liable…..

- Airline auto-pilots
  - Pilot liable
- Motor vehicle cruise control
  - Human driver liable
- Workplace robots
  - Employer liable

But Will a Human Operator of an AI System Really Have the Capability and Duty to Prevent Unexpected Harm?

Small business who uses AI financial software program?

Employer who purchases industrial robots?

Doctor using results from an AI medical scan reader?

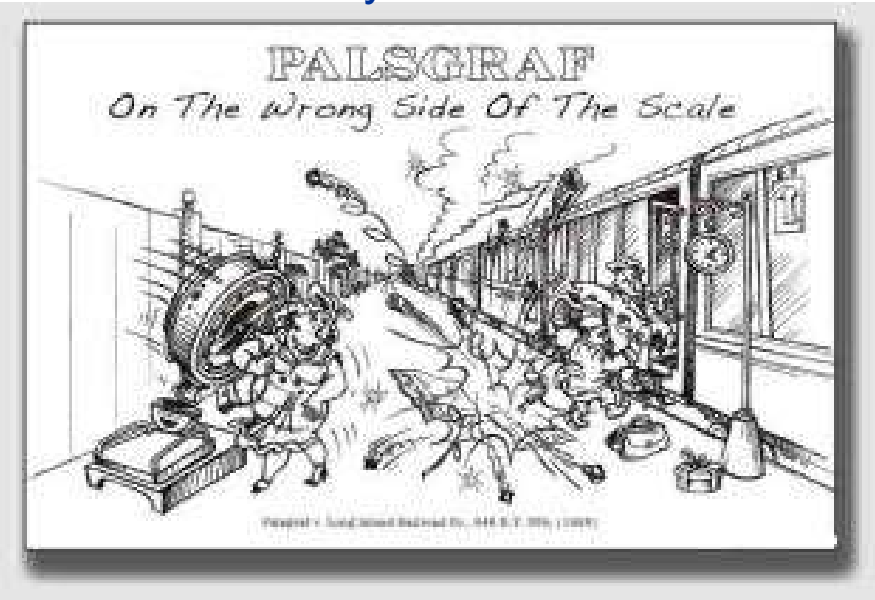
Soldier who deploys an autonomous weapon?

Operator of a fully autonomous car?

Maybe the AI Developer/Manufacturer Should Be Held Liable?

Mens rea = Guilty mind

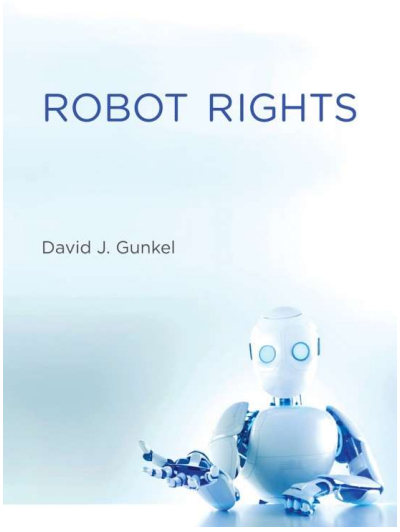
Foreseeability



Defective Design

- A defective design is one that is unreasonably dangerous

  "the foreseeable risks of harm posed by the product could have been reduced or avoided by the adoption of a reasonable alternative design …, and the omission of the alternative design renders the product not reasonably safe."



Can We Hold the Machine Liable?

European Parliament
2014-2019

Plenary sitting

A8-0005/2017

27.1.2017

REPORT

with recommendations to the Commission on Civil Law Rules on Robotics
(2015/2103(INL))

Committee on Legal Affairs

creating a specific legal status for robots in the long run, so that at least the most sophisticated autonomous robots could be established as having the status of electronic persons responsible for making good any damage they may cause, and possibly applying electronic personality to cases where robots make autonomous decisions or otherwise interact with third parties independently;

AI as Evidence

http://blogs.wsj.com/law/2016/07/13/court-judges-can-consider-predictive-algorithms-in-sentencing/

LAW BLOG

Court: Judges Can Consider Predictive Algorithms in Sentencing

By **JOE PALAZZOLO**
Jul 13, 2016 5:04 pm ET

The Wisconsin Supreme Court, located in the State Capitol, is set to rule on whether algorithms used to predict criminality can be used in sentencing. *PHOTO: GETTY IMAGES/SCIENCE SOURCE*

Sentencing judges may take into account algorithms that score offenders based on their risk of committing future crimes, Wisconsin's high court ruled on Wednesday.

K.W. v. Armstrong

- "Budget Tool": algorithm used to assess budgets for Medicaid payments
- Allegation: developmentally disabled persons were systematically under-paid by new algorithm
- U.S. District Court conclusion: "patients and the public have a right to transparency of the algorithmic process". [180 F. Supp. 3d 703 (D. Idaho 2016)]

Texas settles lawsuit over STAAR use in teacher evaluations

dallasnews.com/news/education/2017/05/03/texas-settles-lawsuit-staar-use-teacher-evaluations

May 3, 2017

AUSTIN — Texas will not require school districts to evaluate teachers based on STAAR performance, according to a settlement announced Wednesday between teacher groups and the state's education commissioner.

State teacher groups sued the state over Texas Education Agency rules that would have required districts to factor in how well students did on state-mandated tests when appraising educators. That suit was to go to trial this month.

Questions about algorithm based decision-making:

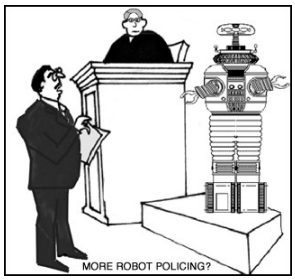
- Can government agency use proprietary algorithm?
- Who has burden to show if decisions reasonable?
- What if algorithm is machine learning black box?

THE YALE LAW JOURNAL

Machine Testimony

ANDREA ROTH

ABSTRACT. Machines play increasingly crucial roles in establishing facts in legal disputes. Some machines convey information—the images of cameras, the measurements of thermometers, the opinions of expert systems. When a litigant offers a human assertion for its truth, the law subjects it to testimonial safeguards—such as impeachment and the hearsay rule—to give juries the context necessary to assess the source's credibility. But the law on machine conveyance is confused: courts shoehorn them into existing rules by treating them as "hearsay," as "real evidence," or as "methods" underlying human expert opinions. These attempts have not been wholly unsuccessful, but they are intellectually incoherent and fail to fully empower juries to assess machine credibility. This Article seeks to resolve this confusion and offer a coherent framework for conceptualizing and regulating machine evidence. First, it explains that some machine evidence, like human testimony, depends on the credibility of a source. Just as so-called "hearsay dangers" lurk in human assertions, "black box dangers"—human and machine errors causing a machine to be false by design, inarticulate, or analytically unsound—potentially lurk in machine conveyances. Second, it offers a taxonomy of machine evidence, explaining which types implicate credibility and how courts have attempted to regulate them through existing law. Third, it offers a new vision of testimonial safeguards for machines. It explores credibility testing in the form of front-end design, input, and operation protocols; pretrial disclosure and access rules; authentication and reliability rules; impeachment and courtroom testing mechanisms; jury instructions; and corroboration rules. And it explains why machine sources can be "witnesses" under the Sixth Amendment, refocusing the right of confrontation on meaningful impeachment. The Article concludes by suggesting how the decoupling of credibility testing from the prevailing courtroom-centered hearsay model could benefit the law of testimony more broadly.



23

Picture this: you're sitting in a police interrogation room, struggling to describe the face of a criminal to a sketch artist. You pause, wrinkling your brow, trying to remember the distance between his eyes and the shape of his nose.

Suddenly, the detective offers you an easier way: would you like to have your brain scanned instead, so that machines can automatically reconstruct the face in your mind's eye from reading your brain waves?

Brain-Machine Interfaces

60 Minutes – April 22, 2018

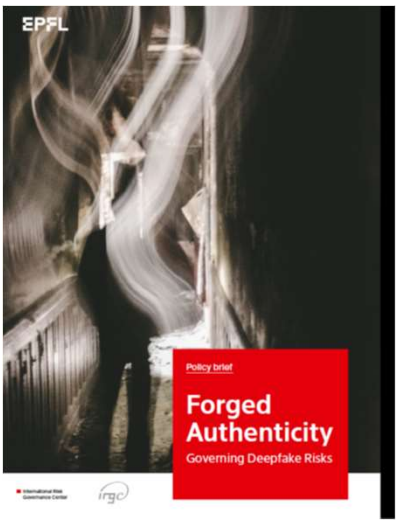
deep fakes

The New York Times

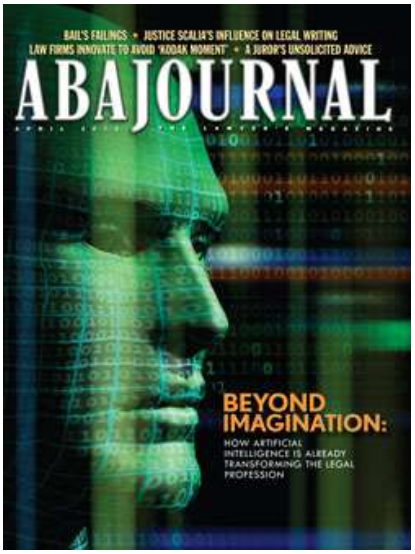
Here Come the Fake Videos, Too

Artificial intelligence video tools make it relatively easy to put one person's face on another person's body with few traces of manipulation. I tried it on myself. What could go wrong?

By Kevin Roose (https://www.nytimes.com/by/kevin-roose) March 4, 2018



AI and the Practice of Law



"Artificial intelligence is changing the way lawyers think, the way they do business and the way they interact with clients. Artificial intelligence is more than legal technology. It is the next great hope that will revolutionize the legal profession…. What makes artificial intelligence stand out is the potential for a paradigm shift in how legal work is done."

Artificial Intelligence is Molding the Attorney of the Future

New applications for cognitive computing are on the horizon to help attorneys address evolving business challenges and make more intelligent, strategic decisions.

Jeff Pfeifer, LexisNexis, Legaltech News

August 9, 2017 | 0 Comments

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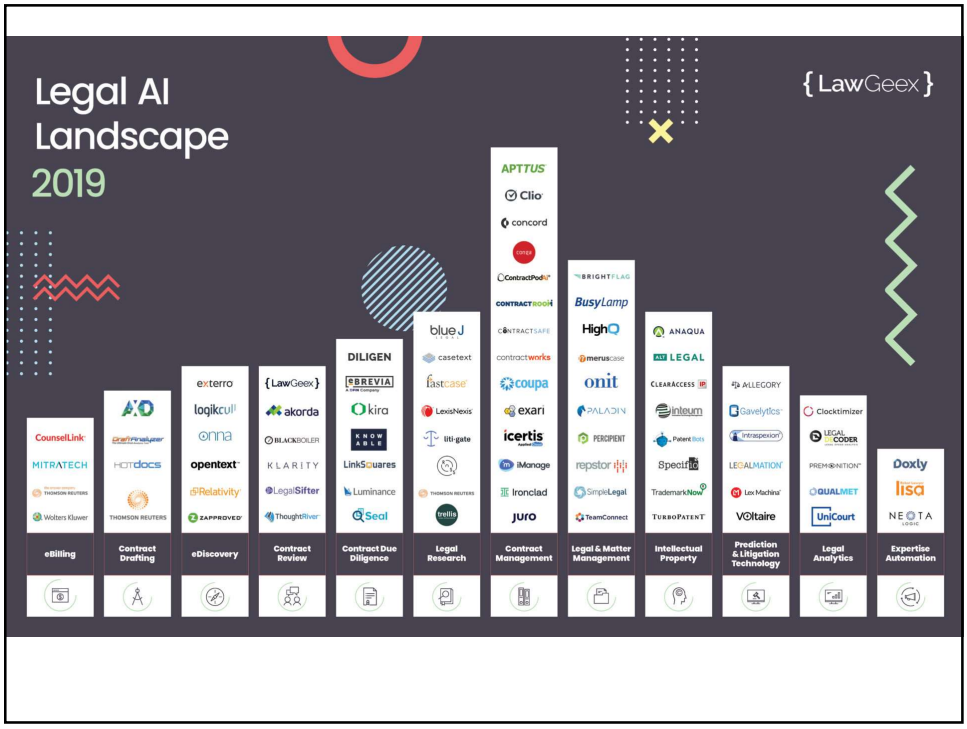
REPRINTS

Credit: Denis Simonov/Shutterstock.com

QUICK SURVEY OF LEGAL AI APPLICATIONS



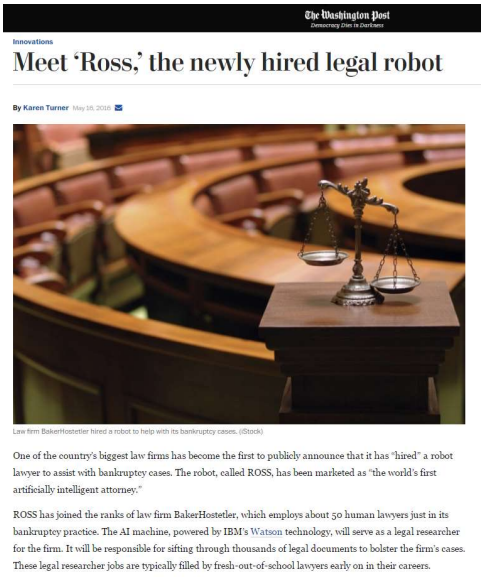
Electronic Discovery

According to academic studies, application of these methods (TAR) has resulted in significant monetary savings and time in locating ESI for disclosure in comparison to manual or "human eyes" review. "Studies have shown that technology-assisted review is at least 50 times more efficient than human-review, or manual, review."

Maura Grossman & Gordon McCormack, *Efficient E-Discovery,* ABA J. (April 2012).

TECHNOLOGY-ASSISTED REVIEW (TAR)

Legal Research



The Washington Post
Democracy Dies in Darkness

Innovations

Meet 'Ross,' the newly hired legal robot

By Karen Turner May 16, 2016

Law firm BakerHostetler hired a robot to help with its bankruptcy cases. (iStock)

One of the country's biggest law firms has become the first to publicly announce that it has "hired" a robot lawyer to assist with bankruptcy cases. The robot, called ROSS, has been marketed as "the world's first artificially intelligent attorney."

ROSS has joined the ranks of law firm BakerHostetler, which employs about 50 human lawyers just in its bankruptcy practice. The AI machine, powered by IBM's Watson technology, will serve as a legal researcher for the firm. It will be responsible for sifting through thousands of legal documents to bolster the firm's cases. These legal researcher jobs are typically filled by fresh-out-of-school lawyers early on in their careers.

Can read over a million legal pages per minute

Case Analytics

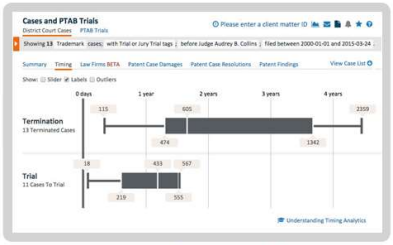
Lex Machina®

Analyze Judges and Courts

Would you like to know how Judge Sleet will likely respond to a motion to transfer? Use our *Motion Metrics Report* to view grant/deny rates. See how a specific judge compares to the national average. Click the hyperlinks in the chart to further explore the underlying motion-order chains. With Lex Machina, you can easily view:

- How likely is a judge to grant or deny a specific motion?
- How long do cases take to get to a grant of a permanent injunction, to trial, or to termination before a judge?
- How likely is a judge to find infringement of a patent, fair use of a trademark, or a Securities Act violation?

Motion Chains surface the relationships between motions, responses, replies, surreplies, and orders; and display order outcomes (grant vs. denied vs. partial grant-deny), time to order, which party filed, and the case.



Timing analytics will help you find answers to these other questions: "How long will it take for my Trademark case to go to trial before Judge Collins?" This can help with setting your litigation budget.

Billing and Staffing Analytics

Wolters Kluwer
ELM Solutions

Total Spend: $72+ Billion	Total Law Firms and Vendors: 22,000+
Total Timekeepers: 286,000	Total Hours: 398 Million
Total Line Items: 120 Million	Includes Am Law 200 Firms, Magic Circle Firms, Fortune 500 Corporations as well as small to medium size firms and companies

Extracted from Actual Invoices

Permission Based

Case Outcome Prediction

AI Beats Human Lawyers in CaseCrunch Prediction Showdown + DATA UPDATES

artificiallawyer.com/2017/10/28/ai-beats-human-lawyers-in-casecrunch-prediction-showdown/

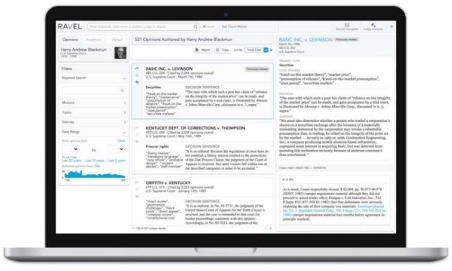
artificiallawyer October 28, 2017

CaseCrunch

Brief Writing/Judge Analytics

Judge Analytics

Understand how judges think, write, and rule.



Judge Dashboard

The Judge Dashboard encompasses your judge's entire career — every decision, every citation, housed in a single location. The dashboard lets you identify the cases, circuits, and judges your judge finds most persuasive.

Specific Language

Uncover the rules and specific language your judge favors and commonly cites. Pinpoint distinctions that set your judge apart to ensure you never miss the nuance that could win or lose your argument.

Litigation Strategy

Make data-driven decisions about everything from how to frame arguments to whether to file a particular motion - decisions that can make or break a case.

ARTIFICIAL LAWYER

CHANGING THE BUSINESS OF LAW

France Bans Judge Analytics, 5 Years In Prison For Rule Breakers

Jury Screening

Voltaire Uses AI and Big Data to Help Pick Your Jury

artificiallawyer.com/2017/04/26/voltaire-uses-ai-and-big-data-to-help-pick-your-jury/

artificiallawyer April 25, 2017

Legal AI company **Voltaire** has launched an application that will allow lawyers and litigation consultants to rapidly analyse potential jurors by crunching public Big Data, including social media posts.

Monday, November 26, 2018

In Big Law Firm First, O'Melveny To Use Neuroscience And AI To Recruit Associates Hiring Based On Cognitive And Emotional Traits Rather Than Pedigree

By Paul Caron

Bloomberg Law, O'Melveny Could Set Trend With Law Student Cognitive Testing:

O'Melveny & Myers will ask law students interested in joining the firm to play computer games designed to test their cognitive skills while rooting out hiring biases, an approach that may signal a new industry recruitment trend.

Starting in January, first-year law students can opt to play the series of 12 games, which take about 30 minutes to complete in total, to boost their applications for a job at the firm. The software behind the games makes use of artificial intelligence and a customized algorithm to analyze talent in a highly competitive market for the best and brightest candidates.

These cognitive assessment tools are common in corporate hiring, but law firms often rely on more traditional methods. Cognitive skills tests like O'Melveny's, which appears to be the first of its kind used in Big Law, aim to eliminate bias and encourage candidate diversity, but are also known to have limitations. ...

Based on their results, pymetrics will build a so-called "success profile" against which law students can be measured. The software company will then audit the algorithm in order to remove potential gender, racial or ethnic biases in the underlying data.

Legal Chat Bots

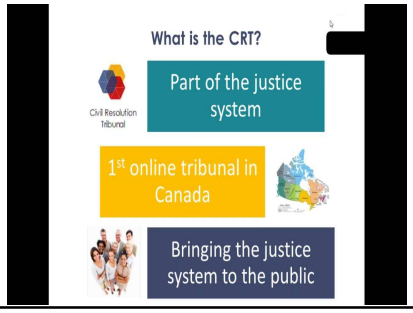
BiggerLawFirm.com

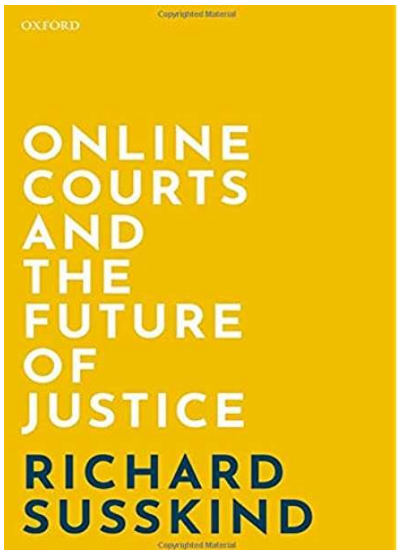
AI and the Court Systems: Some Examples

- Automatic scanning and docketing of court filings
- Facial recognition log-in to court computer systems
- Chatbots for public inquiries
- Juror hotline
- Identify "red flags" in guardianship/ conservatorship cases
- Triage cases for automated case management

Source: NCSC

Online Dispute Resolution





Hey Watson: Local judge first to use IBM's artificial intelligence on juvenile cases

Montgomery County's Capizzi teams with IBM to design system for children's court.

LOCAL By Chris Stewart - Staff Writer

Montgomery County Juvenile Court Judge Anthony Capizzi is working with IBM to harness the power of the company's Watson computer to help judges make quicker, more intelligent decisions in specialty court cases. CHRIS STEWART / STAFF

Q: "Can you foresee a day, when smart machines, driven with artificial intelligences, will assist with courtroom fact-finding or, more controversially even, judicial decision-making?"

C.J. Roberts: "It's a day that's here, and it's putting a significant strain on how the judiciary goes about doing things."

Chief Justice Roberts

NY Times, May 1, 2017

Legal robots deployed in China to help decide thousands of cases

share

Save 3

AI-powered court opened in Hangzhou in 2017 and has handled more than 3 million case; human judge in the loop although most of proceedings handled by AI system

The Holographic Judge

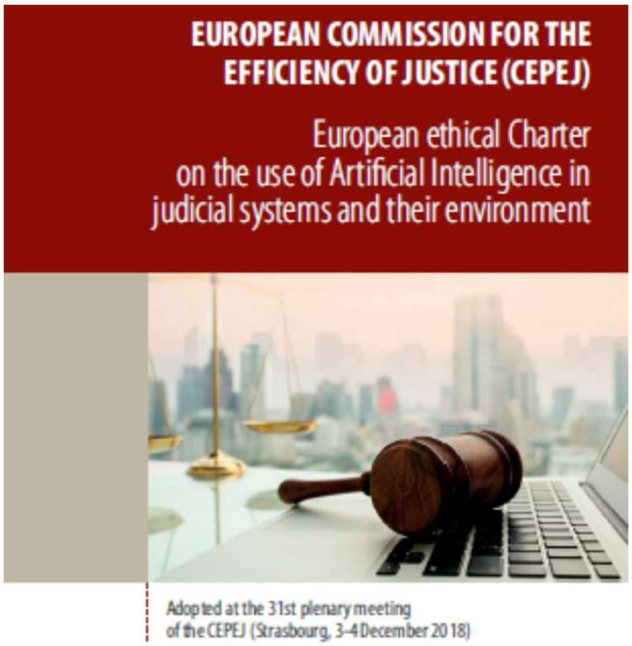
AI playing a role in decision making is not the stuff of science fiction. Focusing on the theories behind decision-making is an exercise for today and not tomorrow.

By **Katherine B. Forrest** | December 30, 2019

New York Law Journal

Beijing Internet Court has decided tens of thousand of cases since 2018

The judges that "appear" by hologram are artificial creations—there is no actual judge sitting in a courtroom whose image is beamed to a mobile device. The hologram-judge looks like a real person but is in fact a synthesized, 3D image of different judges, sort of like the "Mash Up" toys that combine parts of different superheros. Instead of engaging in child's play, though, this hologram-judge sets schedules, asks litigants questions, takes evidence, and issues dispositive rulings.



https://rm.coe.int/ethical-charter-en-for-publication-4-december-2018/16808f699c

PRACTICAL CONSIDERATIONS FOR ATTORNEYS

On the Positive Side…

- "AI presents a myriad of opportunities for firms that are willing to work with it….There are many areas where clients would be willing to spend more money if they could see the added value. For example, a client organization could give all of its contract reviewing to a firm that could handle it quickly, accurately efficiently." (*Robots in Law*)
- Many companies and individuals cannot afford needed legal services; if AI allows firms to deliver legal services more efficiently, more client may be able to afford to engage law firms

Moreover…

"AI and the technologies it enables such as robotics, blockchain, Medtech, Edtech, and FinTech will drive the reinvention of existing sectors from media, healthcare, education, and transport to retail, construction, and financial services. AI is already enabling the next wave of trillion dollar sectors and developments such as autonomous vehicles, DAOs, synthetic biology, smart materials, intelligent cities, blockchain data networks, and smart contracts… All these developments will require the interpretation, reframing and redrafting of legal frameworks and the creation of new legal concepts and dispute resolution mechanisms …" -- Rohit Talwar

Selection of AI Vendors

- To date, AI vendors focus on specific task – no across-the-board legal AI system (yet)
- Law firms may need/want to use several different vendors for different AI tasks
- Likely to be major shake-out of vendors in relatively near future (as has been seen with e-discovery)
- Nature of machine learning is that it takes time for AI system to be trained on and learn a firm's data and operations – would be highly disadvantageous to have start again if vendor goes out of business

Advantage to Early Adopters?

- "Unlike other game changers, such as mobile, where fast followers have benefitted from the lessons learned by early adopters, AI is one of those technologies where it pays to be a first mover – because machine learning means that the system is continually improving as it learns from every matter and transaction. This means that early adopters' systems will be better trained than those of their competitors."
  - Joanna Goodman, *Robots in Law* (2016)

Timing Issues for Law Firms in Adoption of AI

- Go Fast:
  - FOMO- fear of missing out
  - May be increasing hard to compete with a competing law firm using AI
  - AI systems are self-learning – the earlier you start adapting AI system to your practice and standards, the more advanced and bespoke it will be at any point in the future
- Go Slow:
  - AI offerings today are in early stages and will rapidly improve in next few years
  - "Winners" in AI tech still to be determined
  - Patchwork of applications right now
  - AI systems take a lot of time and resources to configure and integrate with practice areas

AI and Legal Malpractice Risks

- Attorneys will be responsible for AI system's mistakes, even though attorneys cannot fully understand or check what AI system does
- Will AI increase law firm liability risk?
  - Most early adopters have reported that improved quality is bigger benefit than increased efficiency
  - Will it be malpractice not to use AI?

AI and New Legal Ethics Challenges

- Attorney A in Law Firm K trains and uses AI system on data from Client X
- Question: Who owns the data-trained system – firm, vendor or client?
  - Can law firm K use this AI system trained with client X with a new matter for client Y?
  - If yes, how does firm K bill client Y?
  - Can client X ask firm K to share AI system with firm L representing X on another matter?
  - If attorney A moves to law firm L, can he take the trained AI system with him? Does it matter if she continues to represent client X?

Disruption of Law Firm Value Chain?

- If AI can do in a few seconds the work of an associate that now takes a couple weeks, how will this affect:
  - Law firm billings?
  - Continued use of billable hour?
  - Partner/associate leverage?
  - How should firms charge for an AI system they have trained?
- Will AI shift legal markets by favoring:
  - Large firms over small/medium firms?
  - In-house over law firms?

Impacts on Young Attorneys

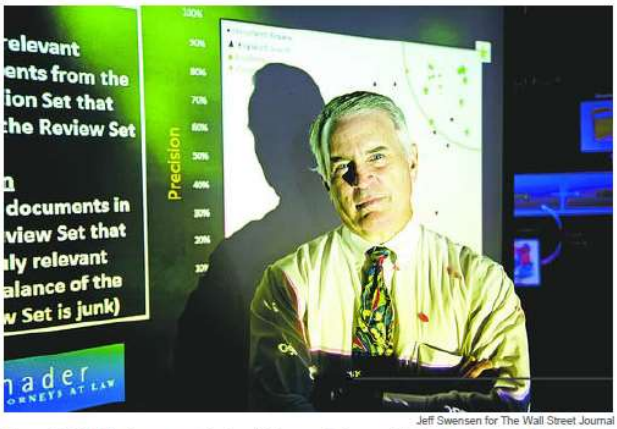
- The functions best done by AI will displace much of the work done by young associates at law firms
  - e.g., document review, legal research
- Some large companies have already informed their law firms that they will no longer pay for the work billed by 1st year associates
- Natural response of law firms will be to hire fewer entry level attorneys
- How will this affect professional pipeline and training for future lawyers?

THE WALL STREET JOURNAL.
WSJ.com

TECHNOLOGY | June 17, 2012, 6:01 p.m. ET

Why Hire a Lawyer? Computers Are Cheaper

By JOE PALAZZOLO



Jeff Swensen for The Wall Street Journal

Thomas C. Gricks III, who represents Landow Aviation, says its lawyers will still review documents that a computer program flags as relevant.

When the roofs of three jet hangers in Virginia collapsed under heavy snow and crushed 14 private jets in 2010, the owner of the hangars prepared for the inevitable lawsuits.

Landow Aviation preserved about 8,000 gigabytes—the equivalent of about eight new desktop computers filled

Technologist

The FindLaw Legal Technology Blog

Machine Learning Saves JPMorgan Chase 360,000 Hours of Legal Work

By Casey C. Sullivan, Esq. on March 8, 2017 10:11 AM

Here's a sobering fact for lawyers: Last year, a machine learning program used by JPMorgan Chase saved the company 360,000 hours of work, work that would normally be performed by lawyers and loan officers.

That's more than 41 *years* worth of nonstop legal work -- all handled in a few seconds, by some well-designed software.

"A New Era of Automation"

So Who Will Win – Humans or Machines?

Human Lawyers?

X

Machine Lawyers?

X

Correct Answer?

+

MIT Technology Review

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Intelligent Machines

More Evidence That Humans and Machines Are Better When They Team Up

By worrying about job displacement, we might end up missing a huge opportunity for technological amplification.

by Will Knight November 8, 2017

MIT computer scientist Daniela Rus.

JUSTIN SAGLIO

Conclusion: AI and the Practice of Law

"Good News"

- Adoption of AI in practice of law will be evolutionary, not revolutionary
- Most lawyer functions will not be performed by AI in foreseeable future
- Adoption of AI offers opportunity to be leader in efficiency, cost savings, accuracy

"Bad News"

- AI will take over a steadily increasing share of law firm billable hours
- AI will require knowledge/abilities outside the existing skill set of most current practicing attorneys
- Incorporation of AI into practice will soon be a matter of keeping up rather than being a leader

"AI is a tool. A tool that we control. It is a tool that can make us more effective and efficient at what we do. It is a tool that can help us deliver our services more quickly and at lower cost. It is a tool that can help us serve more clients and serve them better. It is a tool that can enhance the delivery of legal services and that can help to close the yawning justice gap. It is a tool for good, not for evil. In fact, the dirty little secret of AI is that it can make us even better lawyers than we are without it."

Robert Ambrogi,
Above the Law

One thing is becoming clear: lawyers who use artificial intelligence will replace lawyers who don't.

Sources: AbovetheLaw.com; lawsitesblog.com

And Finally ….

Don’t be afraid …

… we humans are still in control

…. for at least a while yet.

https://www.youtube.com/watch?v=VqwL7GnxiI0