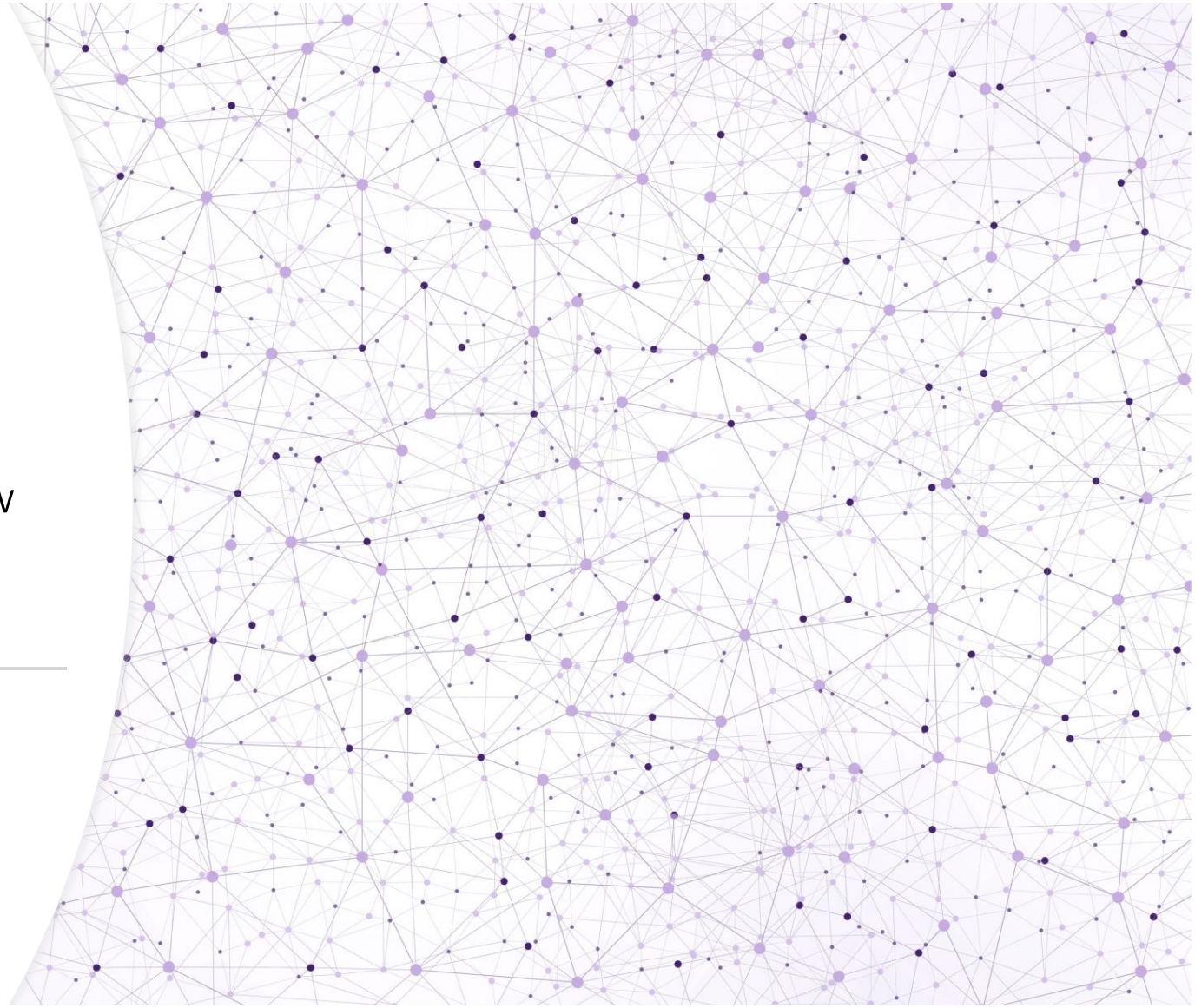
Introduction to AI

September 21, 2023

Dennis Kennedy

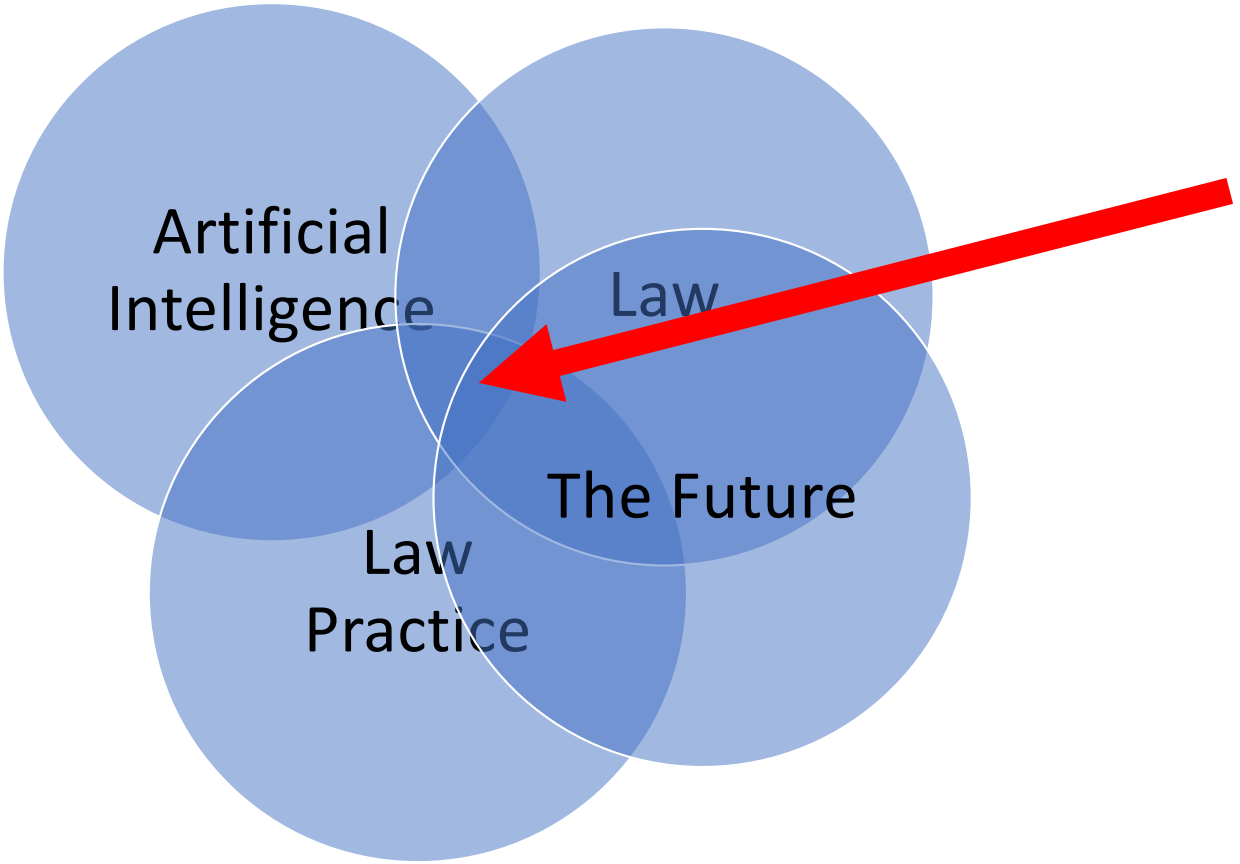
This presentation will help forward-thinking lawyers and legal professionals understand artificial intelligence(s), its (their) legal implications, and how AI will impact the law and the practice of law.



julian
@jyap

A deep learning model trained on 85,000 eyes can tell male from female eyeballs with 87% accuracy but no one knows why

nature.com/articles/s4159...


Artificial Intelligence
Law
The Future
Law Practice

Agenda

- Ethical Framework
- My History in AI
- AI: Historical Perspective
- Some Useful Frameworks
- What's Changed Now with Generative AI and LLMs
- Teaching AI and Law
- My Own AI Experiments
- The Current Legal AI Landscape
- Setting up the Rest of the Day
- Conclusions and Action Steps
- Q &A

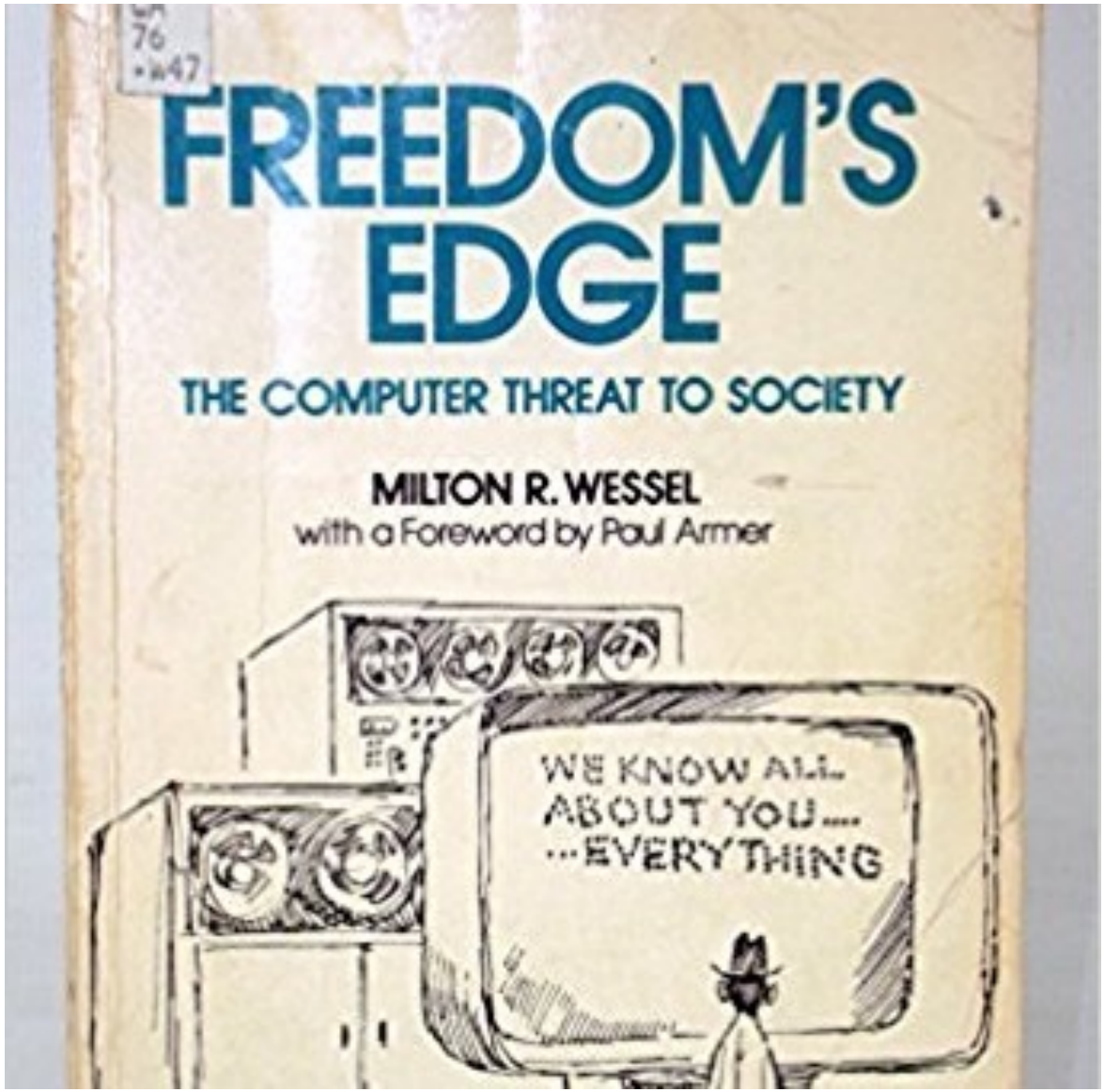
Competence and Confidentiality

RULE 4-1.1: COMPETENCE

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

Maintaining Competence

[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 [emphasis added].



COMPUTERS & THE LAW SEMINAR – Georgetown, 1982

Kennedy Dennis M, Lauritsen M, Oskamp A (eds.) (2002) Artificial Intelligence and Law: Special Issue on Practical Use of AI in Law, 10:4

JUN 23, 2015

Are Lawyers Ready for Artificial Intelligence?

"Artificial Intelligence is a means of designing a system that can perceive its environment and take actions that will maximize its success." -Tom Mighell Developments in Big Data, machine learning, IBM Watson, and other advancements in technology have brought back the cyclical discussion of what artificial intelligence might mean for lawyers. Has anything really changed,...

:00 -38:

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Dennis Kennedy

Dennis Kennedy is an award-winning leader in applying the Internet and technology to law practice. A published author and...

"Artificial Intelligence is a means of designing a system that can perceive its environment and take actions that will maximize its success." -Tom Mighell

Developments in Big Data, machine learning, IBM Watson, and other advancements in technology have brought back the cyclical discussion of what artificial intelligence might mean for lawyers. Has anything really changed, or have we just reached another round of the AI debate?

In this episode of ***The Kennedy-Mighell Report***, **Dennis Kennedy** and **Tom Mighell** analyze

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EPISODE DETAILS

Assessing the Current AI Landscape for the Legal Sector

Dennis Kennedy

London Legal AI Forum, 2017

☐	3	Artificial Intelligence & Law ▲ / Kennedy, Den.	537R / 001	34237	MW/10:30am-11:45am	20	344	Final Paper,

Artificial Intelligence is experiencing a “golden age” of rapid development. As the use of AI increases, people and computers are knowingly and unknowingly interacting in new ways. Lawyers are confronting computer issues in every practice area. Smart contracts. Autonomous vehicles. Creation and ownership of property. Robot policing and warfare. Interconnected products. Autonomous devices. AI requires updated and new regulations, new ways of practicing, and an understanding of how laws and code interact as a new regulatory system within society. This class will look at how computers are affecting the law and what lawyers should know to provide legal services in this hybrid world.

Let’s Go to the Wikipedia

Artificial intelligence (**AI**, also **machine intelligence**, **MI**) is apparently intelligent behaviour by machines, rather than the *natural intelligence* (*NI*) of humans and other animals.

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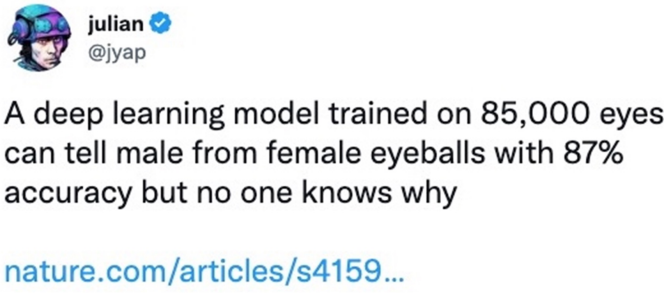

In 2017, generally accepted AI includes:

- Understanding human speech
- Competing at a high level in strategic game systems
- Autonomous cars
- Intelligent routing in content delivery networks
- Military simulations
- Interpreting complex data

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A deep learning model trained on 85,000 eyes can tell male from female eyeballs with 87% accuracy but no one knows why

nature.com/articles/s4159...

THE 70-YEAR (OR 700-YEAR) OVERNIGHT SUCCESS OF AI

1300: Ramon Llull tries to build reasoning machine

1943: McCulloch and Pitts - “Artificial Neurons”

1956: Birth of AI Research – Dartmouth

1960s: The “Great AI Optimism”

1967 – Marvin Minsky

“[W]ithin a generation ... the problem of creating 'artificial intelligence' will substantially be solved.”

1982 – Marvin Minsky

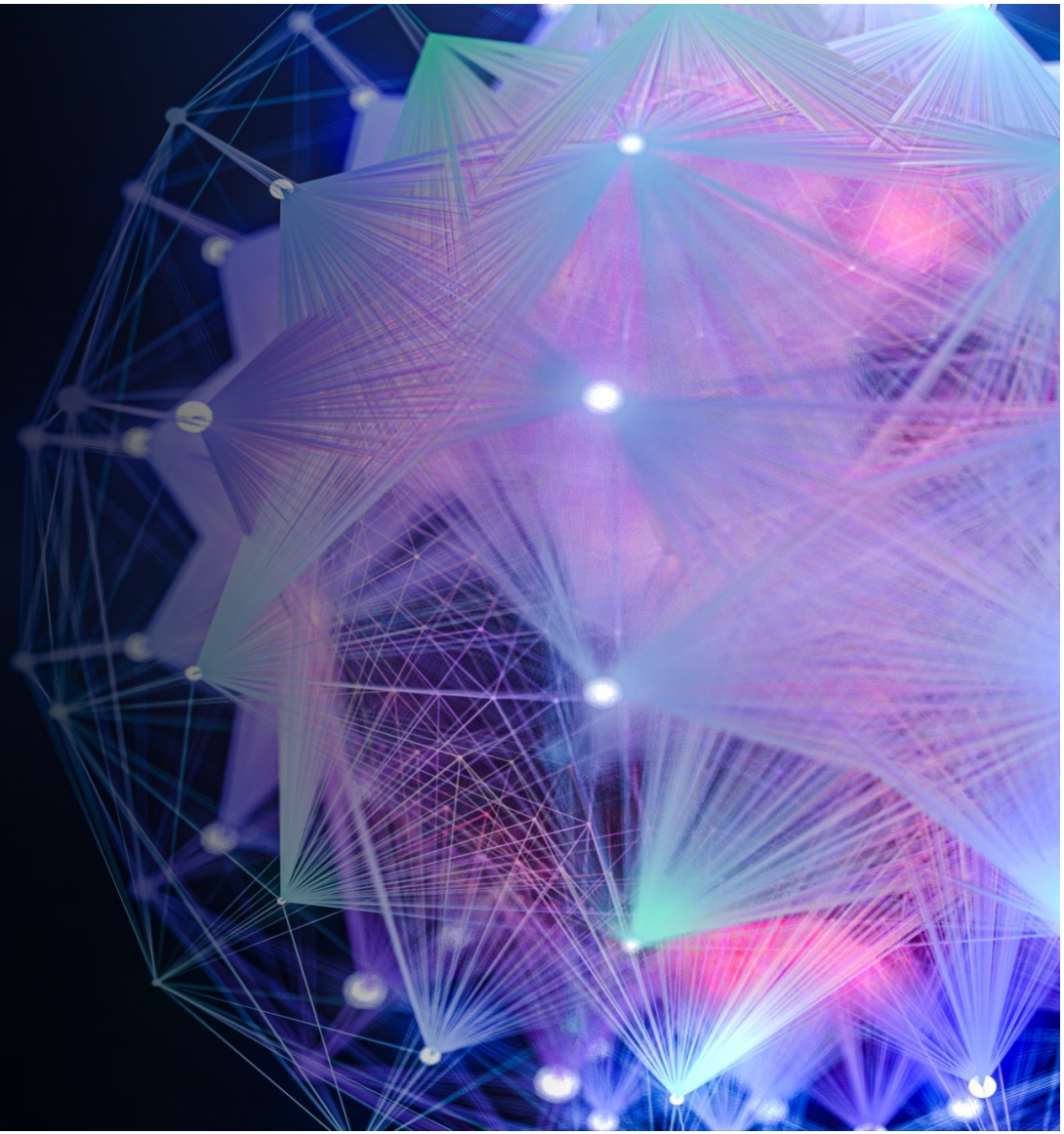
“The AI problem is one of the hardest science has ever undertaken.”

THE 70-YEAR OVERNIGHT SUCCESS

THE AI WINTERS

THE 70-YEAR OVERNIGHT SUCCESS

Bottom up vs. top down, fuzzy logic, neural networks and machine learning, now LLMs and generative AI, specialized computer chips



In 2023, artificial intelligence (AI) has become embedded in every aspect of our society and lives. Here are some major examples:

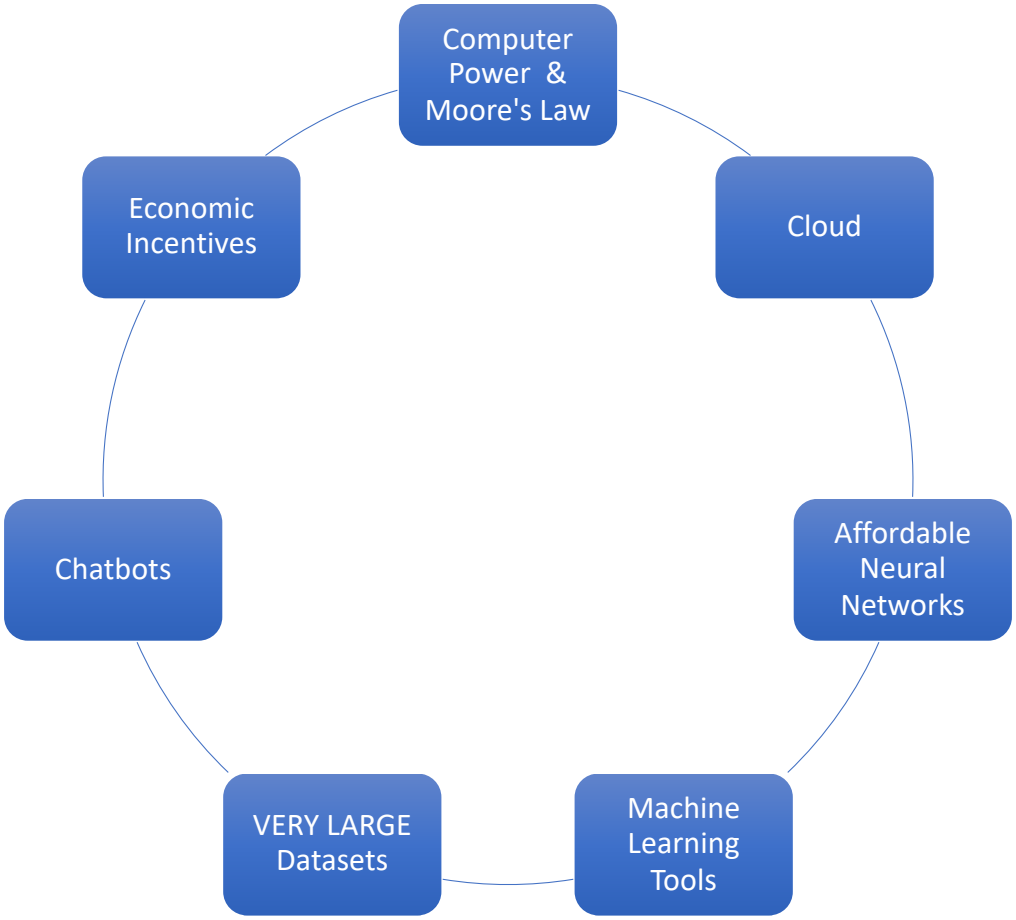
1. **Chatbots and Virtual Assistants**: AI has been used to create chatbots and virtual assistants like Siri and Alexa [1].
2. **Automated Industrial Machinery**: AI is being used to automate processes in industries [1].
3. **Self-Driving Cars**: AI is being used in the development of self-driving cars [1] [2].
4. **Healthcare Management**: AI is being used in healthcare management [2].
5. **Automated Financial Investing**: AI is being used in automated financial investing [2].
6. **Virtual Travel Booking Agent**: AI is being used in virtual travel booking [2].
7. **Social Media Monitoring**: AI is being used in social media monitoring [2].
8. **Manufacturing Robots**: AI is being used in manufacturing robots [2].

chatgpt
Search term

+ Compare

United States | Past 12 months | All categories | Web Search

Interest over time


Computer Power & Moore's Law
Cloud
Affordable Neural Networks
Machine Learning Tools
VERY LARGE Datasets
Chatbots
Economic Incentives

AI – The Current State

Traffic prediction
Airline autopilot
Ride-sharing
Spam filters
Email categorization
Plagiarism checkers
Roboreaders
Videogames
Mobile check deposits
Fraud detection
Credit approvals
Social media and
social networking
Thermostats
Predict parking places
Find new uses for existing drugs

Search
Recommendations
Voice-to-text
Smart personal assistants
Smart cars
Purchase predictions and rewards
Customer support chatbots
News generation
Summary generation
Malware detection
Security screening
Financial trading
Computer-assisted medical diagnosis
Natural language processing
Drones
Navigate map of London Underground
Analyze genetic code
Trade stocks and manage portfolios
Schedule meetings by email

How far advanced is the technology, actually?

Coffee, Tea & Espresso

View All & Manage

Page 4 of 17 | Start over

Traditional Medicinals EveryDay Detox Tea, 16 Tea Bags (Pack of 6)

4.5 out of 5 stars 160

$22.20 prime

TRADITIONAL MEDICINALS HERB TEA,OG1,MOTHER'S MLK,…

4 out of 5 stars 51

$18.54 prime

Mother's Milk Tea - Organic Tea for Breastfeeding, Traditional…

4 out of 5 stars 9

$6.19

Traditional Medicinals Organic Mothers Milk

4 out of 5 stars 4

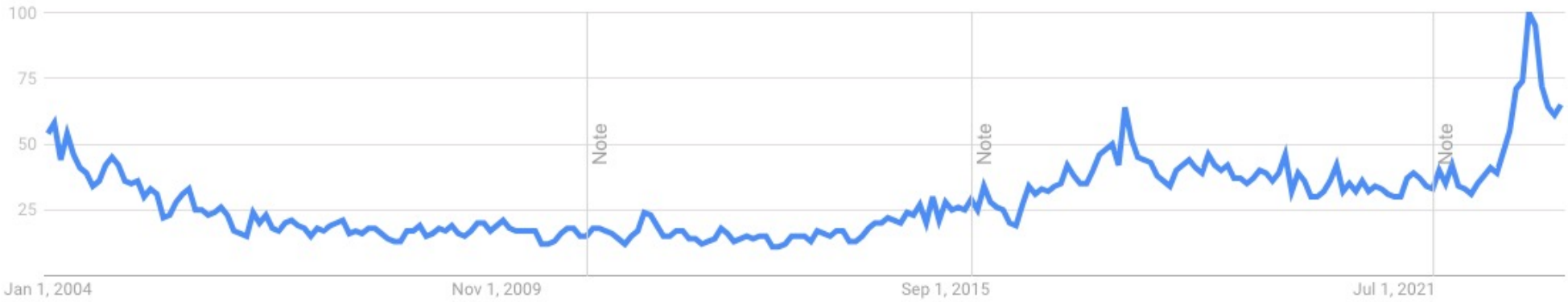
$7.81

artificial intelligence
Search term

+ Compare

United States | 2004 - present | All categories | Web Search

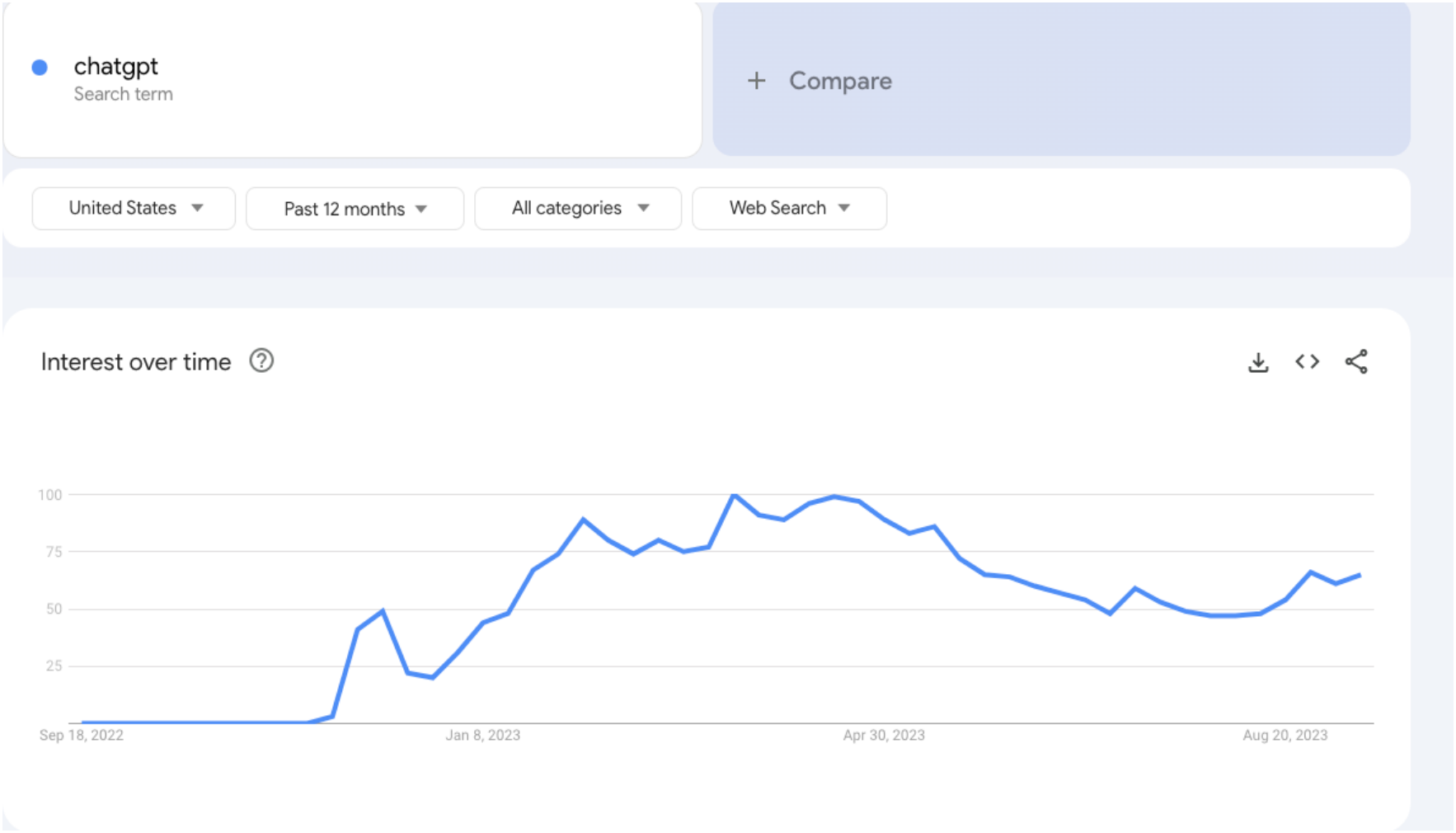
Interest over time



Different tranches of AI technology and how they can be applied to the legal sector

From Dennis's article on AI and KM in 2001

A. Litigation Strategy
B. Client Relationship Management
C. Conflict Checking
D. Delivery of Client Services
E. Managing Information Overload



Source: ARTIFICIAL INTELLIGENCE IN LAW: THE STATE OF PLAY 2016, by Michael Mills, Thomson Reuters Legal Executive Institute

Coffee, Tea & Espresso View All & Manage

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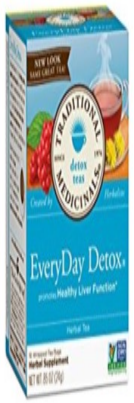

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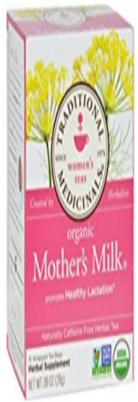
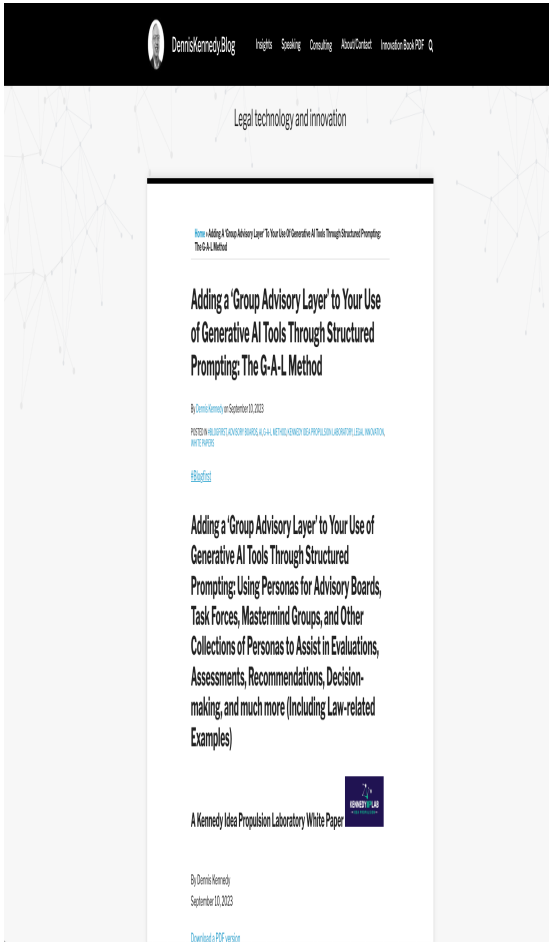


Traditional Medicinals Organic Mothers Milk

4.0 stars 4

$7.81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Adding a 'Group Advisory Layer' to Your Use of Generative AI Tools Through Structured Prompting: The G-A-L Method
By Dennis Kennedy on September 10, 2023
POSTED IN #BLOGFIRST, ADVISORY BOARDS, AI, G-A-L METHOD, KENNEDY IDEA PROPULSION LABORATORY, LEGAL INNOVATION, WHITE PAPERS
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Adding a 'Group Advisory Layer' to Your Use of Generative AI Tools Through Structured Prompting: Using Personas for Advisory Boards, Task Forces, Mastermind Groups, and Other Collections of Personas to Assist in Evaluations, Assessments, Recommendations, Decision-making, and much more (Including Law-related Examples)
A Kennedy Idea Propulsion Laboratory White Paper
By Dennis Kennedy
September 10, 2023
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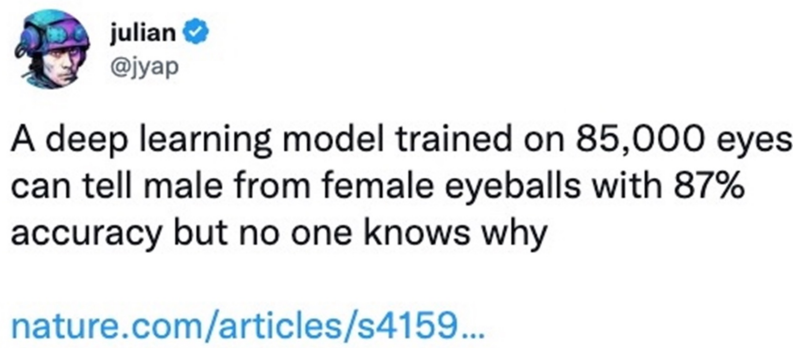
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A deep learning model trained on 85,000 eyes can tell male from female eyeballs with 87% accuracy but no one knows why
nature.com/articles/s4159...

2017

Legal Research
Electronic Discovery
Outcome prediction and litigation finance
Contract analysis

Projections around future developments and applications for AI focused upon the legal sector

Traffic prediction
Airline autopilot
Ride-sharing
Spam filters
Email categorization
Plagiarism checkers
Roboreaders
Videogames
Mobile check deposits
Fraud detection
Credit approvals
Social media and
social networking
Thermostats
Predict parking places
Find new uses for existing drugs

Search
Recommendations
Voice-to-text
Smart personal assistants
Smart cars
Purchase predictions and rewards
Customer support chatbots
News generation
Summary generation
Malware detection
Security screening
Financial trading
Computer-assisted medical diagnosis
Natural language processing
Drones
Navigate map of London Underground
Analyze genetic code
Trade stocks and manage portfolios
Schedule meetings by email

ChatGPT, Generative AI, and LLMs – What's Different Now?

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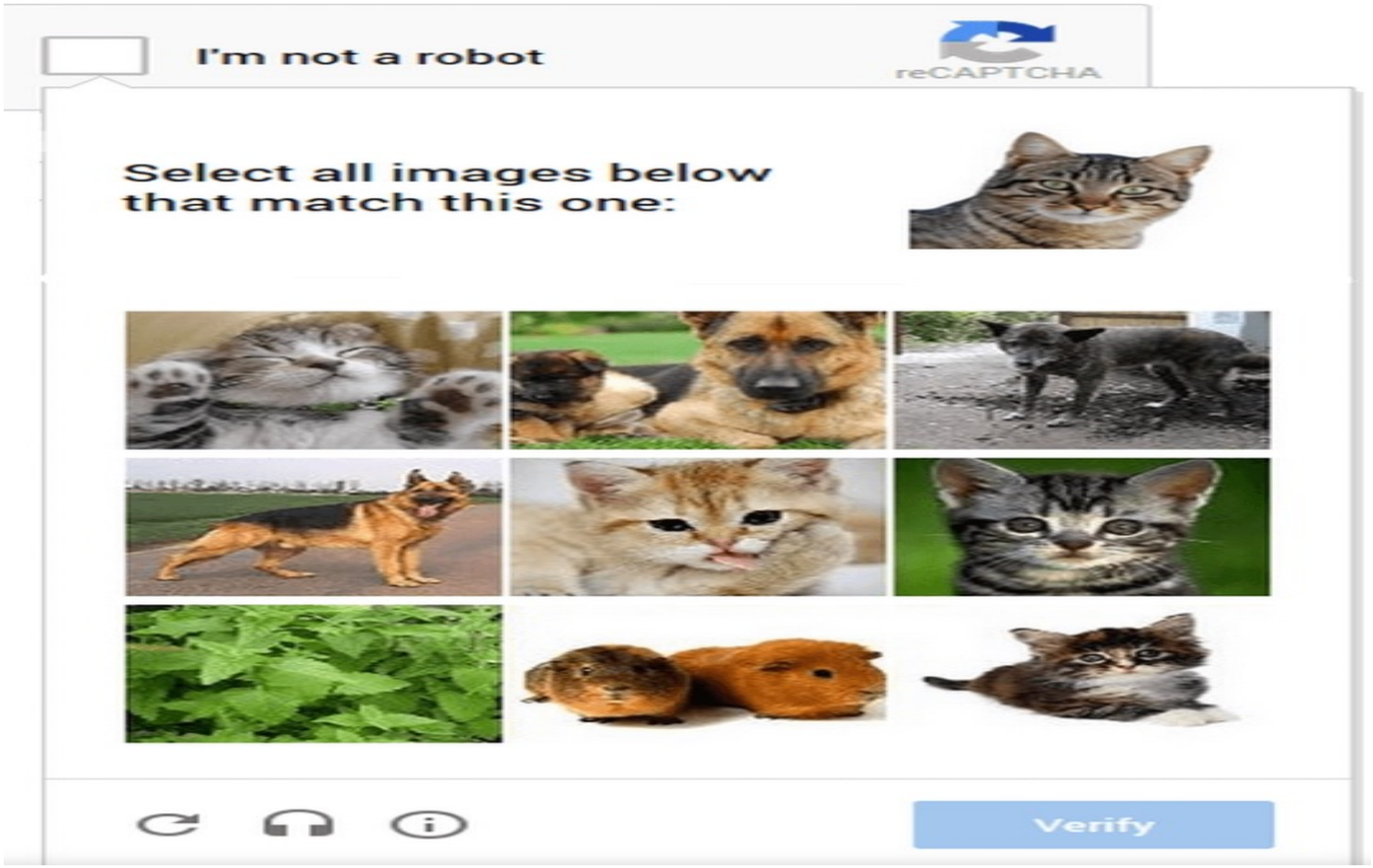
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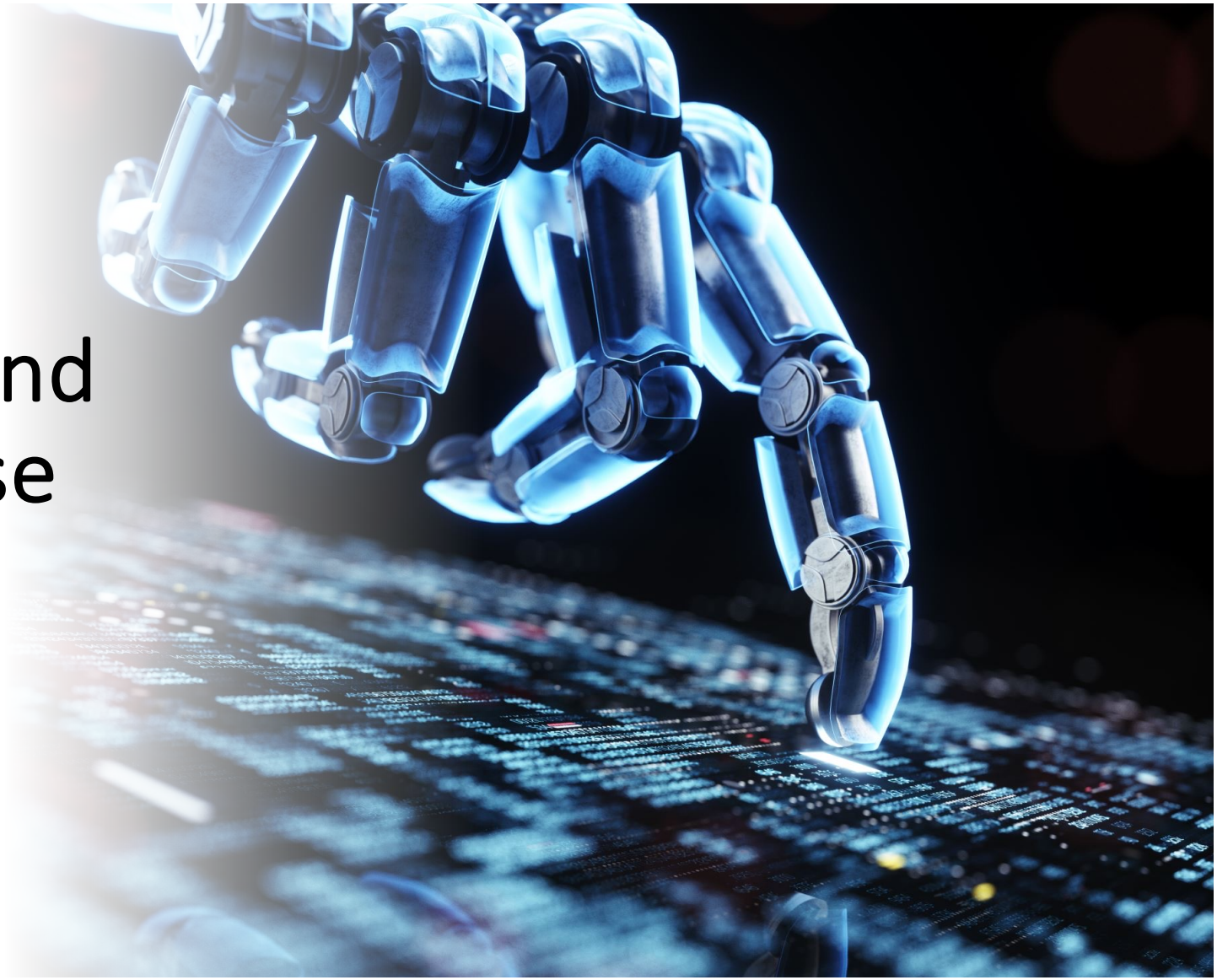
Current and Future Use Cases



What would you, right now, be comfortable with using generative AI for in law practice?

How will your answer change by the end of the day?

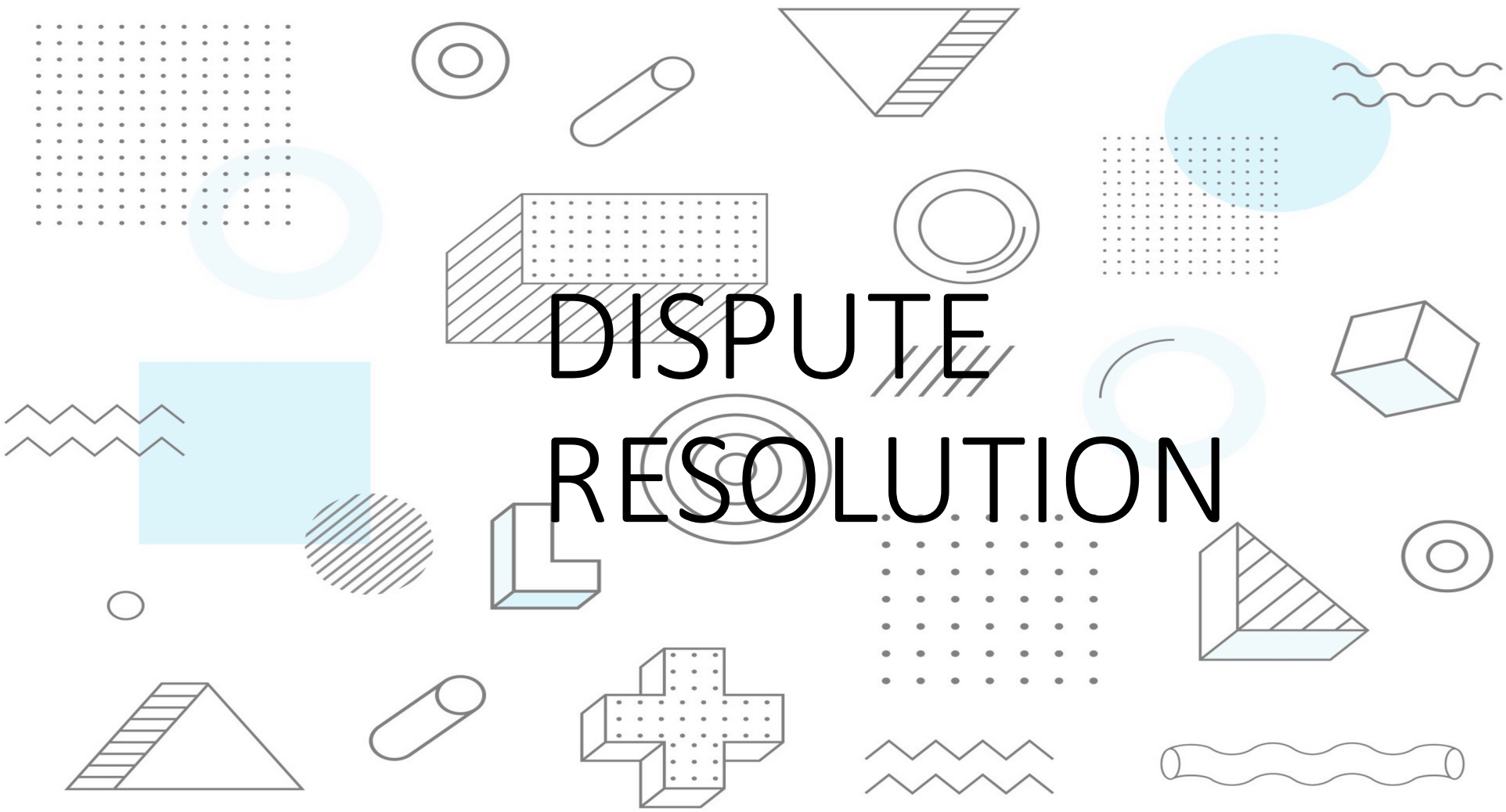
Generative artificial intelligence (also **generative AI** or **GenAI**[1]) is artificial intelligence capable of generating text, images, or other media, using generative models.[2][3][4] Generative AI models learn the patterns and structure of their input training data and then generate new data that has similar characteristics.[5][6]

In the early 2020s, advances in transformer-based deep neural networks enabled a number of generative AI systems notable for accepting natural language prompts as input. These include large language model chatbots such as ChatGPT, Bing Chat, Bard, and LLaMA, and text-to-image artificial intelligence art systems such as Stable Diffusion, Midjourney, and DALL-E.[7][8][9]

KEVIN KELLY AND THE INEVITABLE

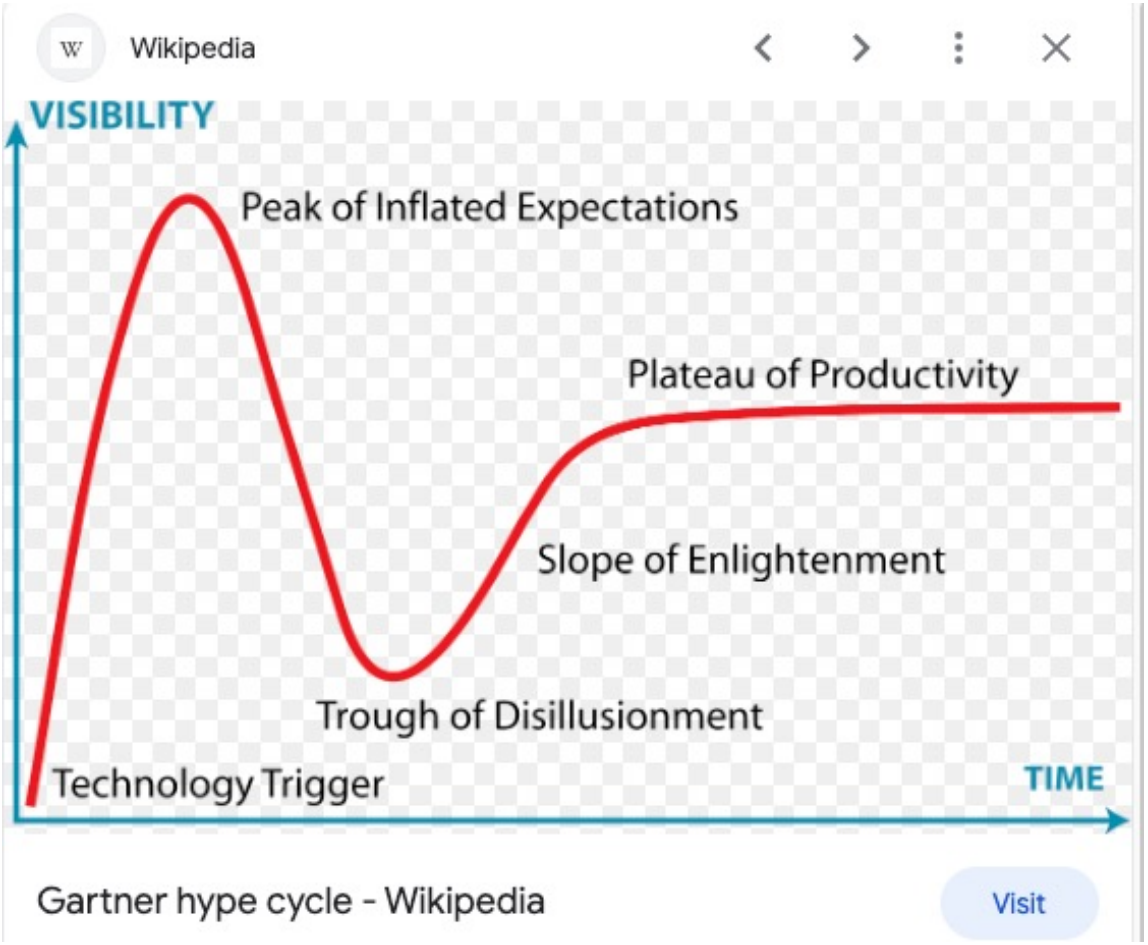
E-DISCOVERY EXAMPLE

LAW NAVIGATION


DISPUTE
RESOLUTION

ACCESS TO JUSTICE

CLIENT-DRIVEN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Peak of Inflated Expectations
Plateau of Productivity
Slope of Enlightenment
Trough of Disillusionment
Technology Trigger
TIME
Gartner hype cycle - Wikipedia
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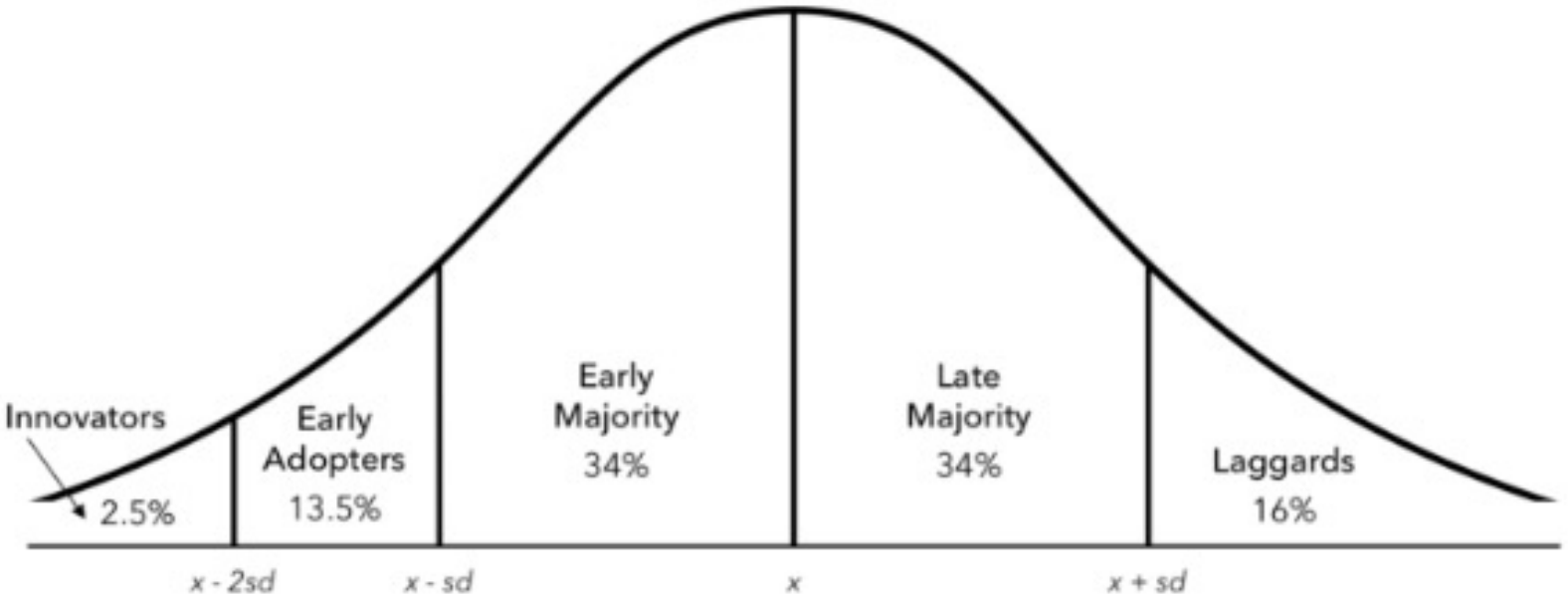
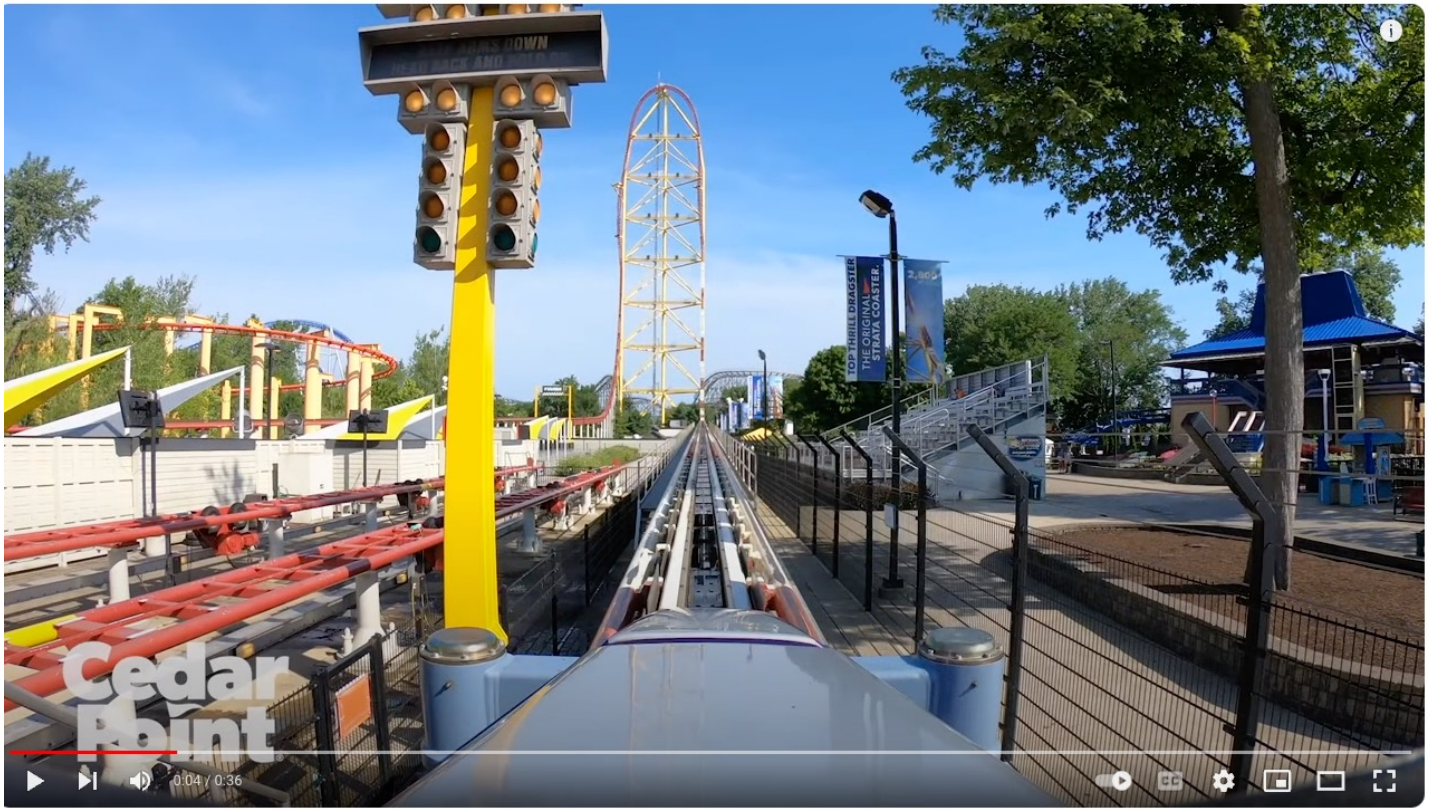


Relationship between types of adopters classified by innovativeness and their location on the adoption curve.

SOURCE: Everett M. Rogers, *Diffusions of Innovations*, 5th ed. (New York: Free Press, 2003), p. 281.



'op Thrill Dragster Official POV - Cedar Point, Sandusky Ohio!

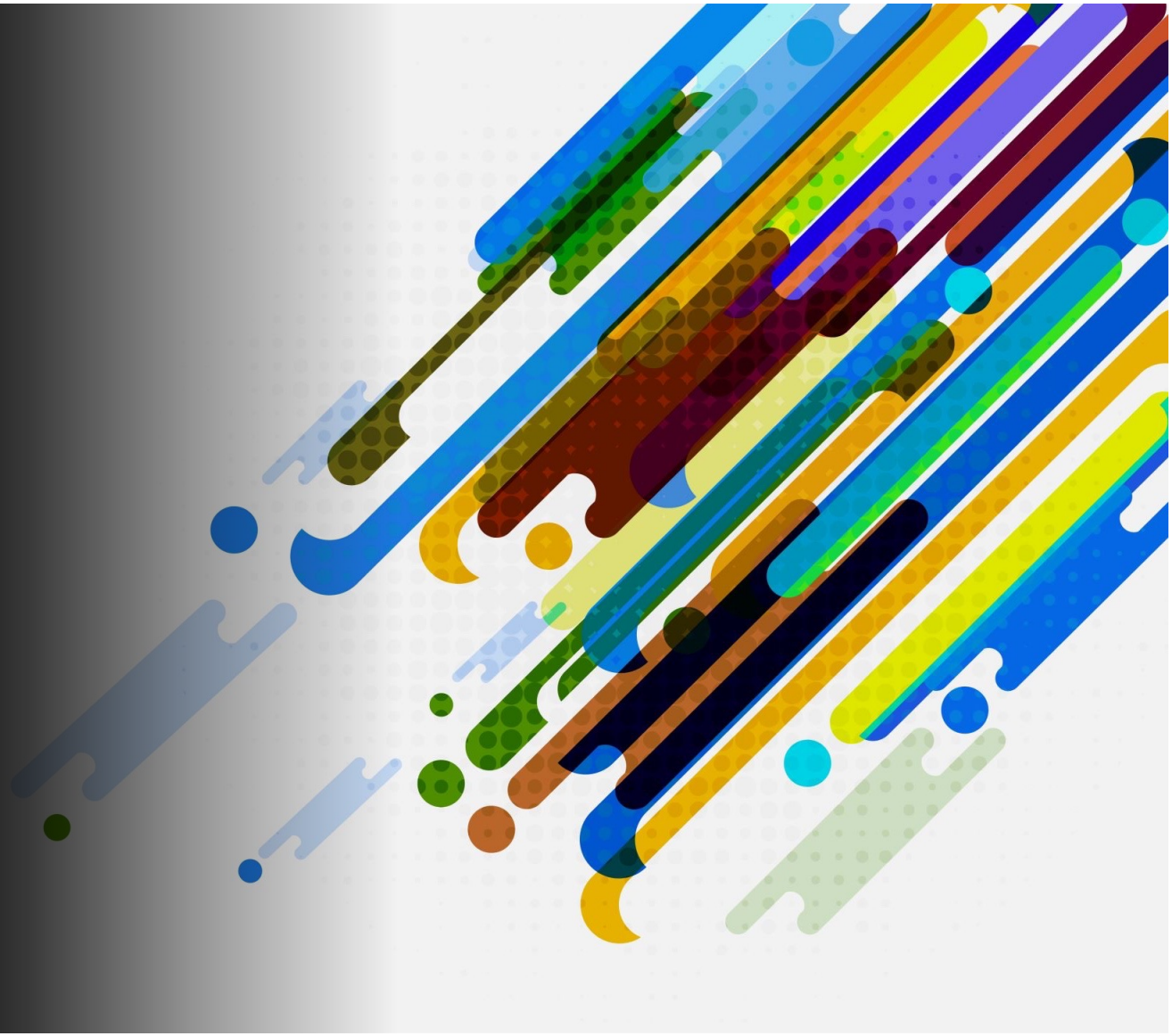
https://www.youtube.com/watch?v=zfzfoPuBgfc

My Laboratory Experiments

Promptcrafting

PCRO Technique

Persona
Context
Request
Output



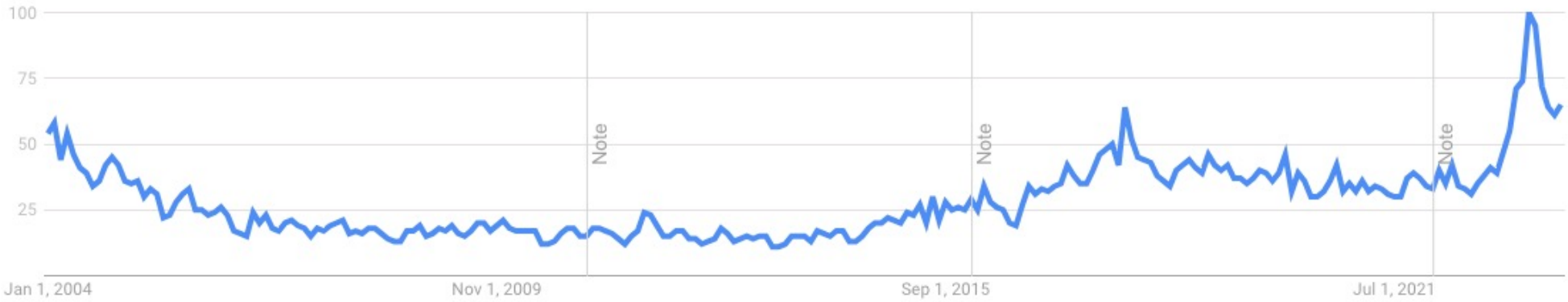
Top Thrill Dragster Official POV – Cedar Point, Sandusky Ohio!

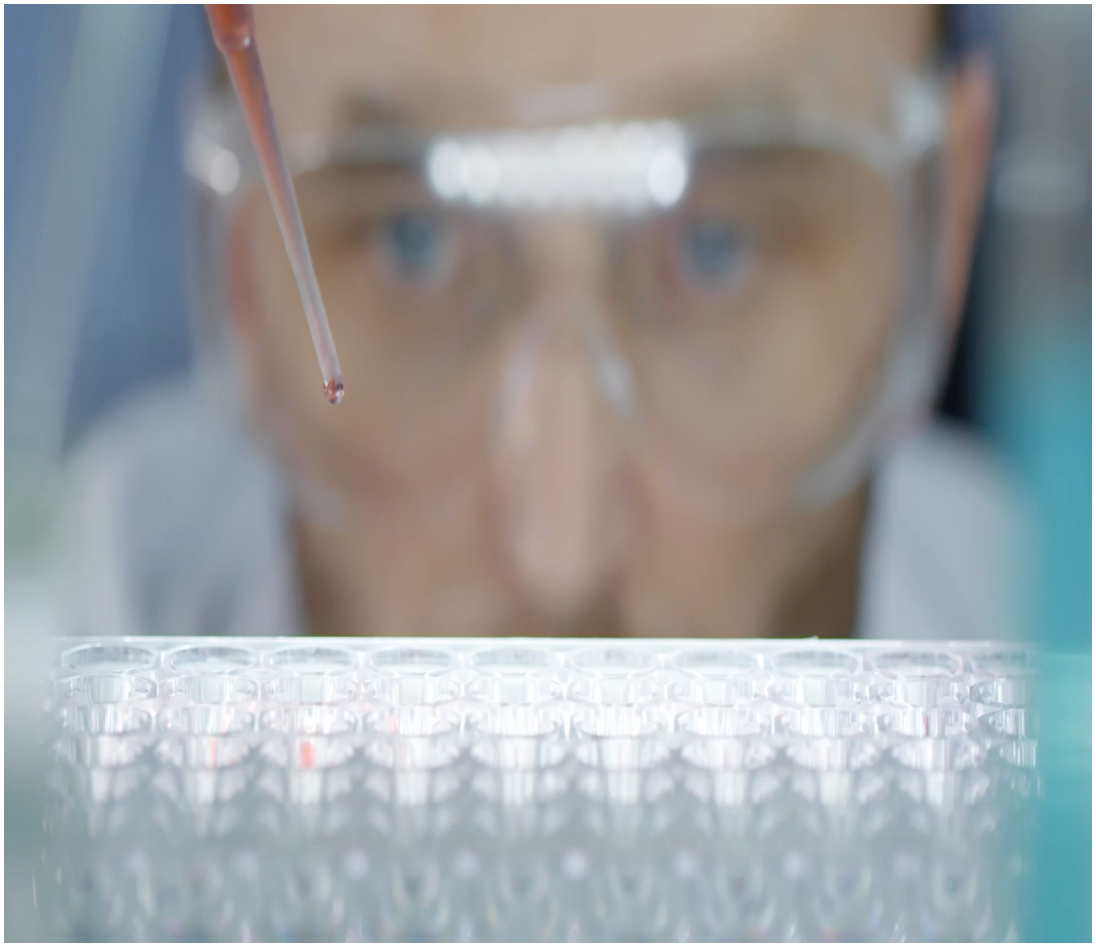
artificial intelligence
Search term

+ Compare

United States | 2004 - present | All categories | Web Search

Interest over time





Dator's Method:

1. **Continued Growth - "Augmented Advocacy"**: The future sees a linear growth in the application of AI. Law firms incorporate AI as supportive tools that enhance human capabilities. This future is characterized by smarter tools and more efficient law practices but remains recognizably close to our current state.
2. **Collapse - "Lost Faith in Algorithms"**: Over-reliance or a major failure in a high-profile legal case causes the legal profession to retract its adoption of AI. Law firms return to more traditional practices, and the tech bubble surrounding legal AI bursts due to dwindling trust.
3. **Discipline - "Strictly Regulated AI"**: Major controversies lead to stringent regulations on how and when AI can be used in the legal profession. There's a balance between human and machine, but every AI application has strict oversight and operates within narrow boundaries.
4. **Transformation - "AI Judiciary"**: A revolutionary change in how we view the legal system. AI doesn't just assist lawyers; it becomes an integral part of the judiciary. Courts and law firms operate on AI-driven consensus models, changing the very nature of how justice is perceived and delivered.

Uncertainties:

1. **Scale of AI Automation** (From Task-specific to Whole-process)
2. **Human vs. AI Success Rate** (From Humans Superior to AI Superior)

	Task-specific Automation	**Whole-process Automation**
Humans Superior	*Analog Advocates*	*Humans Overseeing Machines*
AI Superior	*Digital Assistants*	*Silicon Solicitors*

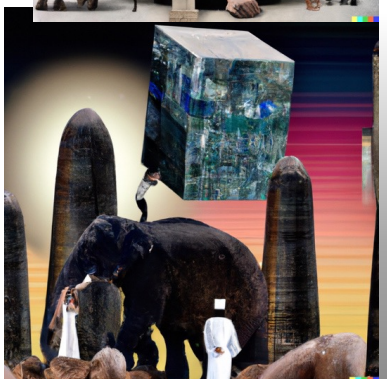
1. **Analog Advocates**: AI is used only for specific tasks, and humans are perceived as more accurate and effective. The legal profession remains mostly traditional with AI as a minor tool.
2. **Digital Assistants**: While AI is used only for specific tasks, it outperforms humans in those areas. Lawyers focus on tasks where human touch and judgment are irreplaceable.
3. **Humans Overseeing Machines**: AI manages entire processes, but humans are still considered superior in decision-making. Lawyers oversee and intervene as necessary, ensuring the system doesn't make errors.
4. **Silicon Solicitors**: AI dominates the legal landscape, handling complete processes more effectively than humans. The role of humans shifts drastically, perhaps focusing on client relationships or ethical considerations.

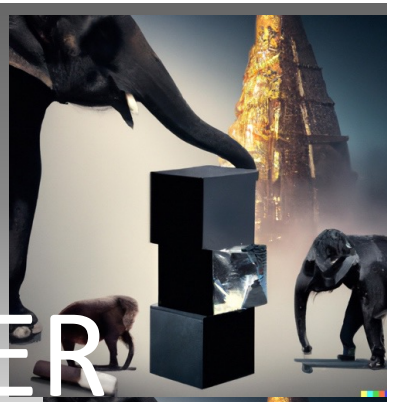
Many people use a prompt like "*ChatGPT, show me some ways I might exercise to lose weight.*"

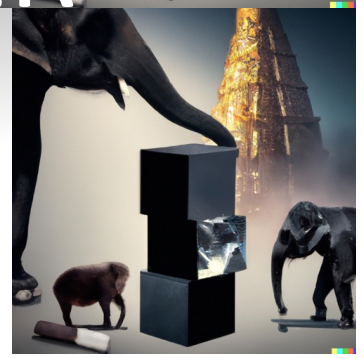
Compare that prompt to this one: "*Assume that you are an experienced and expert personal trainer with specialized training in low-impact exercises and exercise as part of a weight loss program. Also assume that I am a reasonably fit older adult male who exercises regularly. What would be a great low-impact workout regimen to help me lose weight? Create a recommended workout plan for the next thirty days that includes reasonable objectives.*"

Which prompt will give you the results that you want? I invite you to try them and compare the results.

BRINGING IT ALL TOGETHER







BRINGING IT ALL TOGETHER

THE POWER OF THE HYBRID

Human in the Loop

AI AS A SERVICE

Just-in-time, just-enough AI

LETTING HUMANS DO WHAT THEY DO BEST

WHAT IS THAT?

Conclusions and Challenges

Amara's Law:

We tend to overestimate the effect of a technology in the short run and underestimate the effect in the long run

An “enabling technology”

“a technical breakthrough that takes a difficult task and suddenly makes it doable, easy; it opens the door to change, which then comes in an unconsidered, breathless rush.” - Ellen Ullman

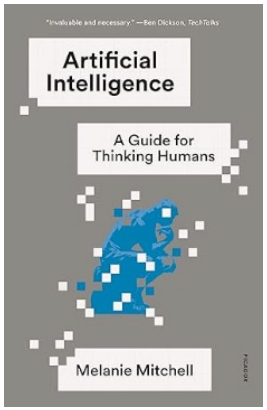
HOMO FABER – Humans as tool makers

The future is already here – it's just unevenly distributed.

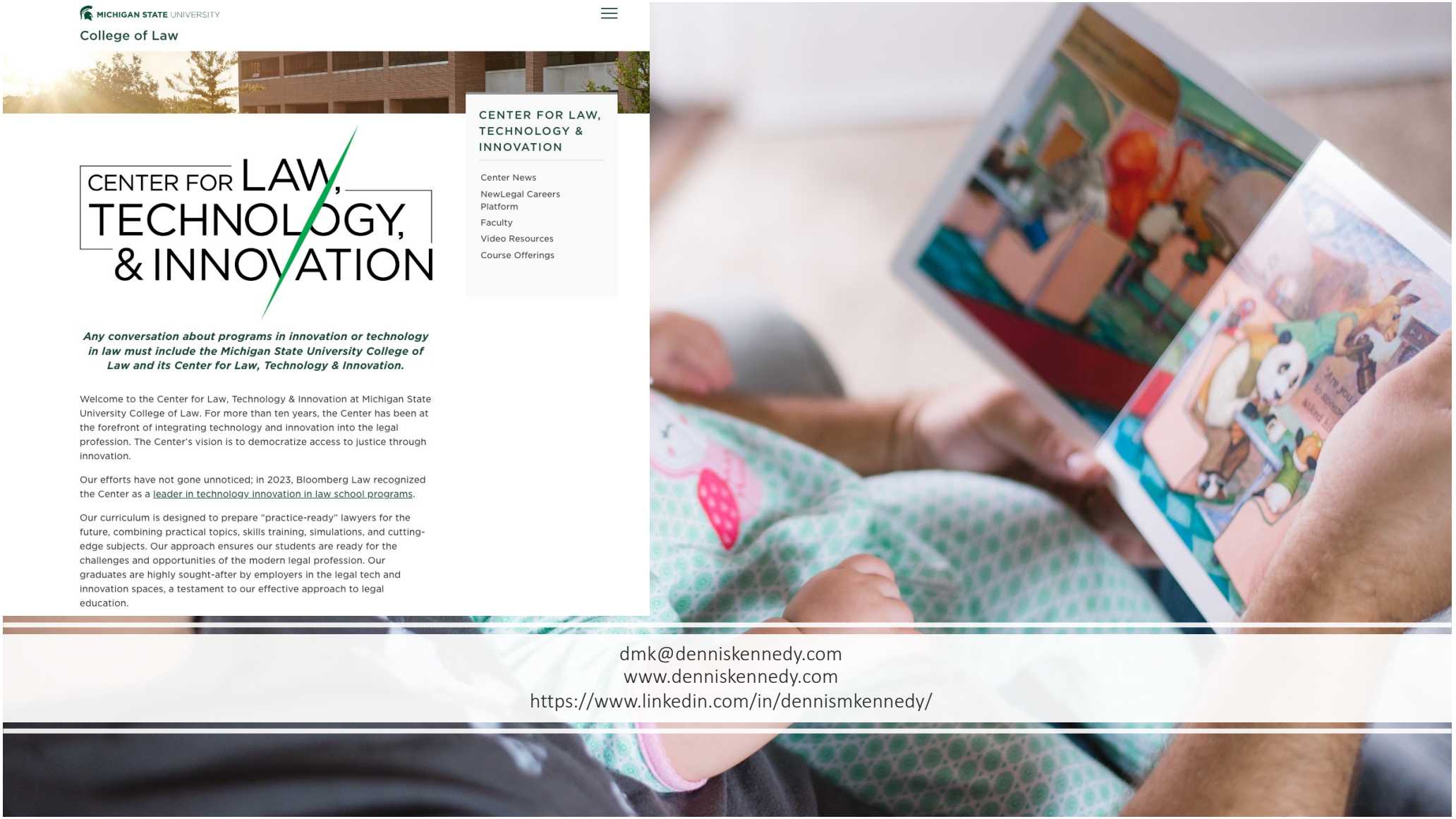
- *William Gibson*

Action Steps

- **Melanie Mitchell, Artificial Intelligence, A Guide for Thinking Humans**
- **Personal Experiments with ChatGPT ($20/month version) – Ethan Mollick**
- **Jot down your list of problems you'd like AI to solve for you**



Open discussion



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