



Artificial Intelligence in Mental Health Counseling



Balancing Innovation & Client Safety



Lisa Henderson
MA | MS | LPC-MHSP



Learning Objectives

1. Identify the positive and negative implications of AI in mental health care
 1. Administrative efficiencies
 2. Client care
2. Navigate ethical considerations for counselors using AI tools in their mental health practice
3. Apply the Evidence-Based Practice framework to counselors using AI tools
 1. Research Evidence: Staying abreast of the rapidly-growing evidence base
 2. Clinical Expertise: Evaluate counselor competency in selecting and using AI tools
 3. Client's Values, Preferences, and Characteristics: Informed consent with clients about where AI does/does not support their care

Help more people get better faster.

Humans



Technology



What is AI? *an analogy*

Large Language Models are like having every cookbook that's ever been written.



AI is the head pastry chef in a French boulangerie, overseeing many different technologies, making sure they work together to create something wonderful.

Chatbots help you by answering questions or providing information anytime, anywhere, and often hands-free.

Machine Learning is like taking notes every time you bake, applying what you've learned, and getting better over time.

AI Enablement Reality & Theory

THEORETICAL

Singularity

Artificial Super Intelligence

Artificial General Intelligence

Reasoning Systems

Domain-Specific Aptitude

Context-Awareness & Retention

Rules-Based Systems



A.I. TIMELINE

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Computer scientist Alan Turing proposes a test for machine intelligence. If a machine can trick humans into thinking it is human, then it has intelligence

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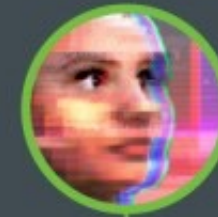
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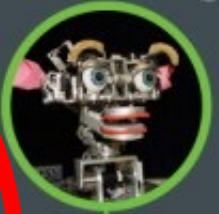
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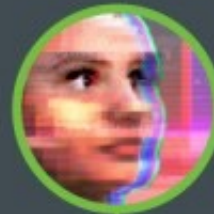
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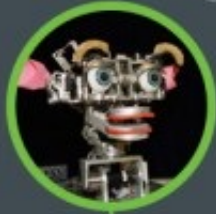
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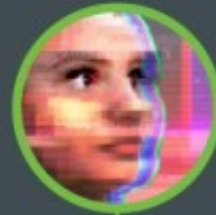
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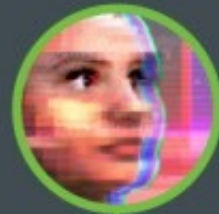
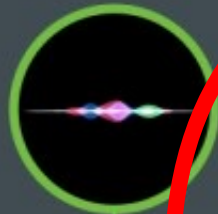
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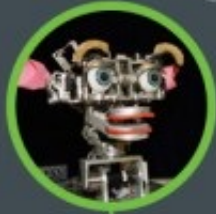
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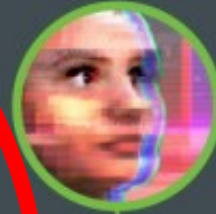
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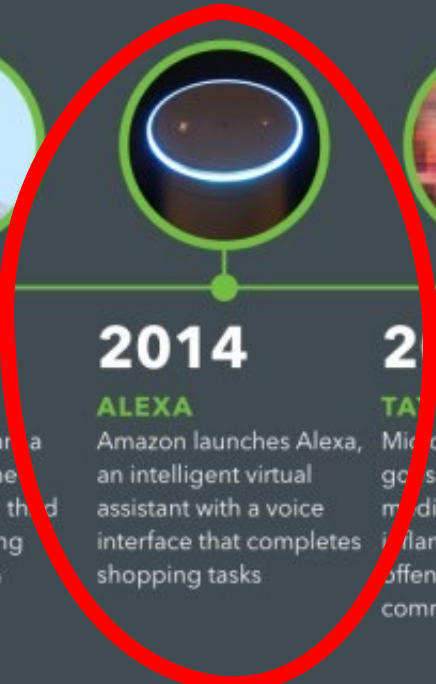
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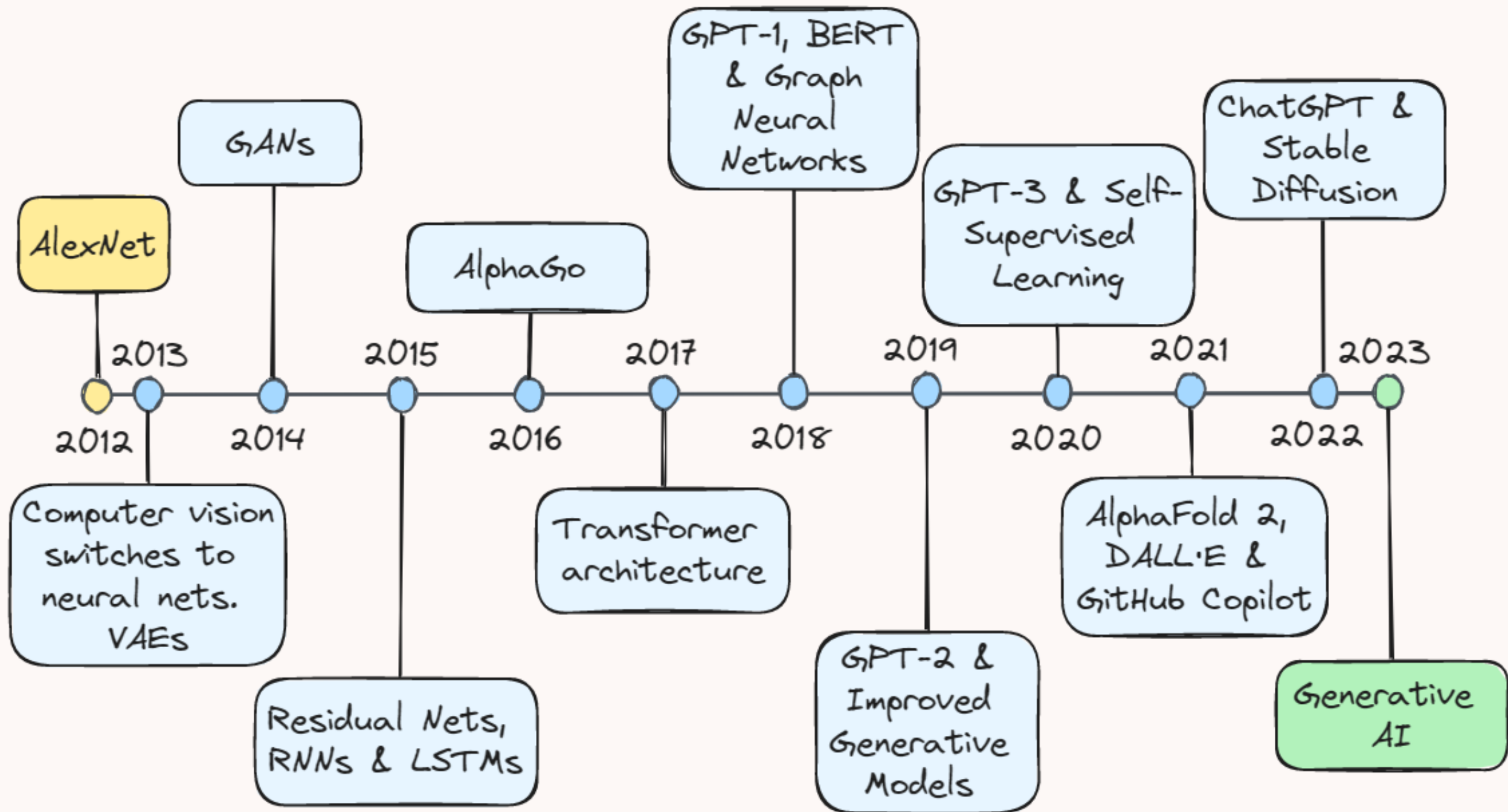
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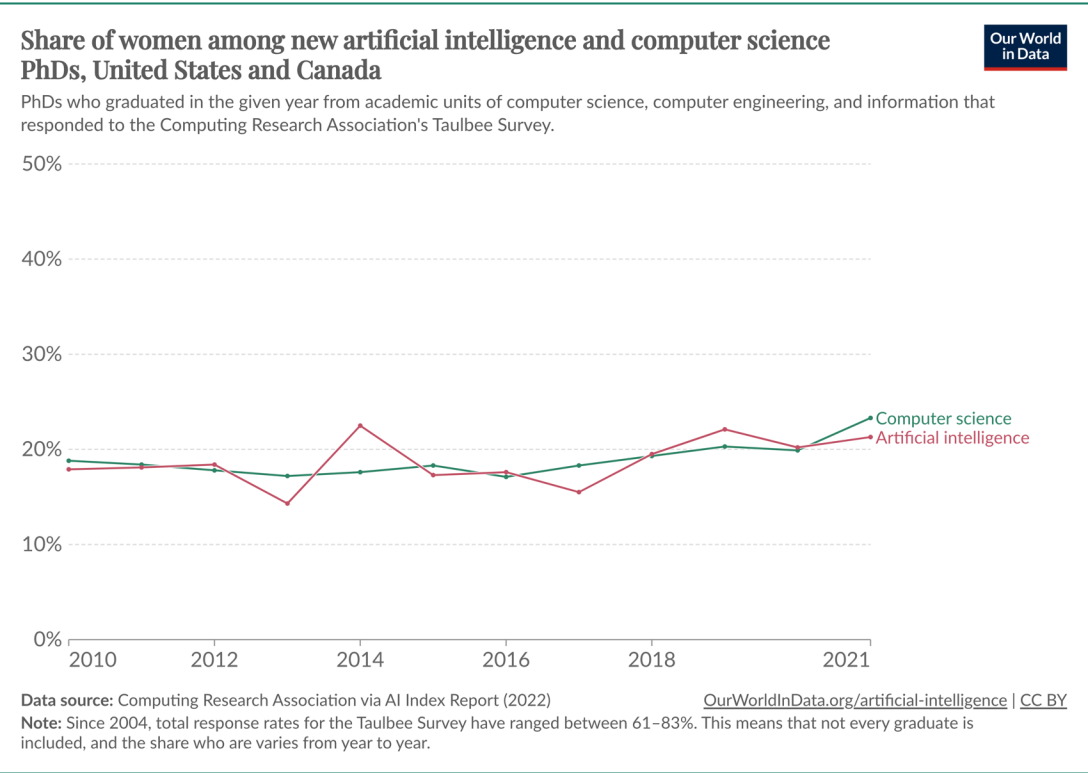
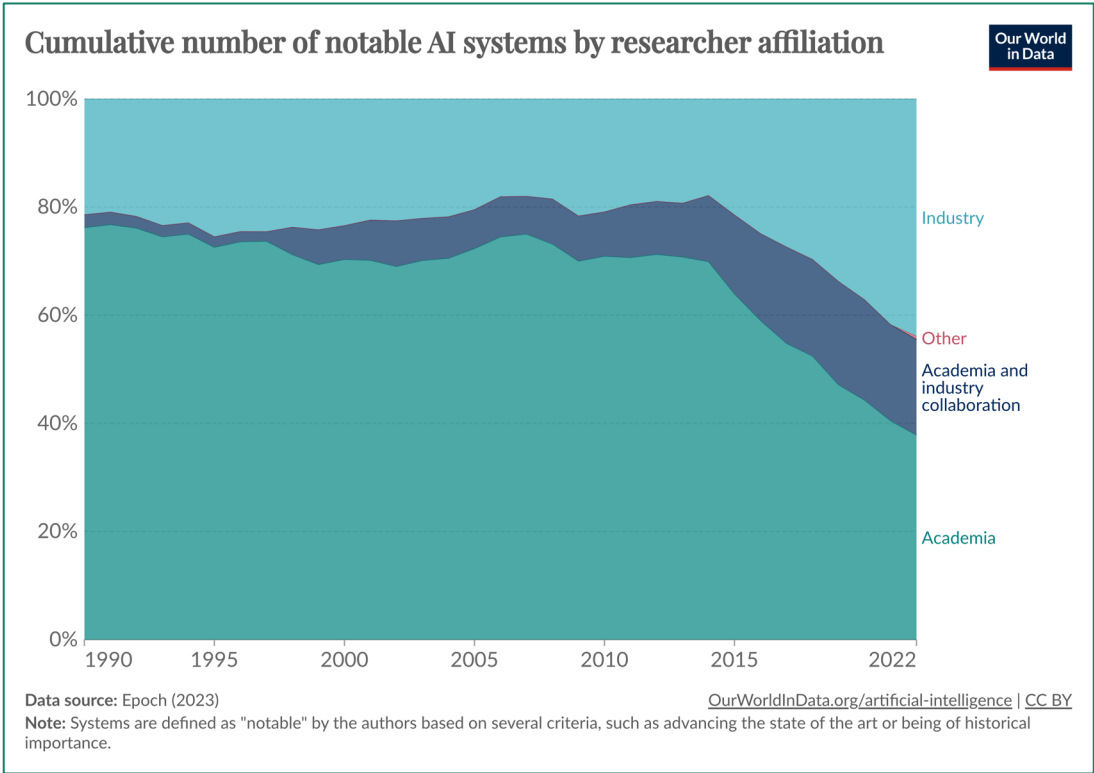
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Most AI is created in Academia, but Industry is gaining ground.

Only 20% of computer science & AI PhDs are awarded to women.

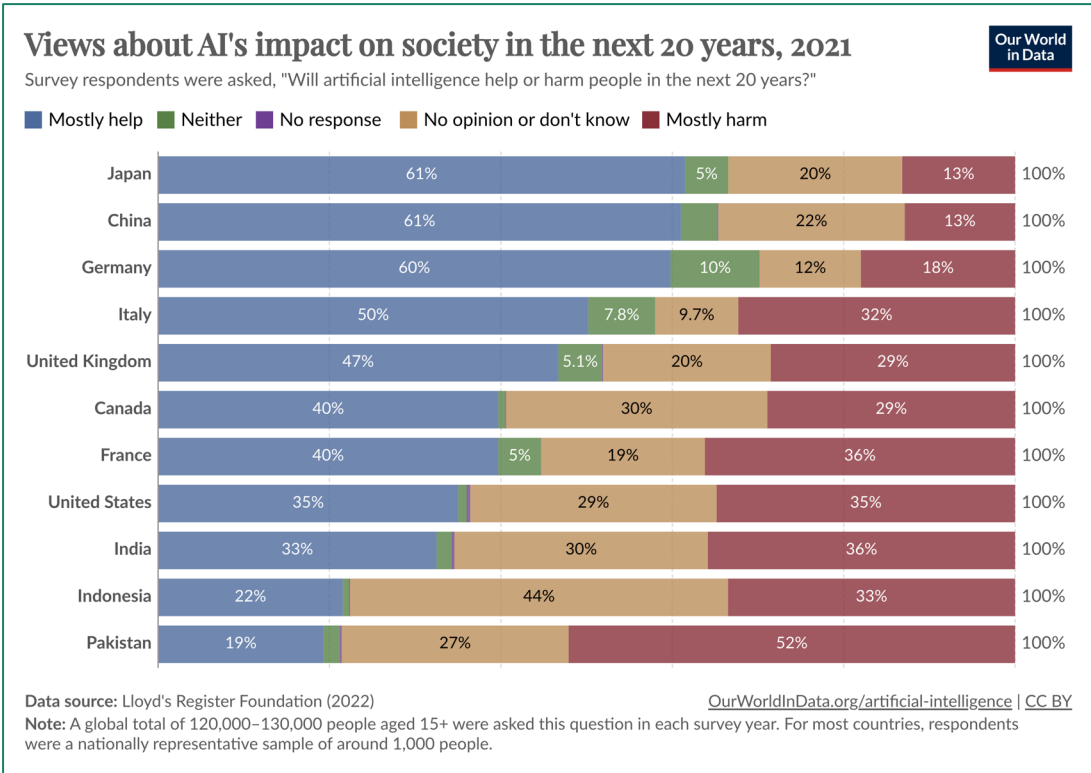


Epoch (2023) – with minor processing by Our World in Data. "Cumulative number of AI systems by researcher affiliation" [dataset]. Epoch, "Parameter, Compute and Data Trends in Machine Learning" [original data].

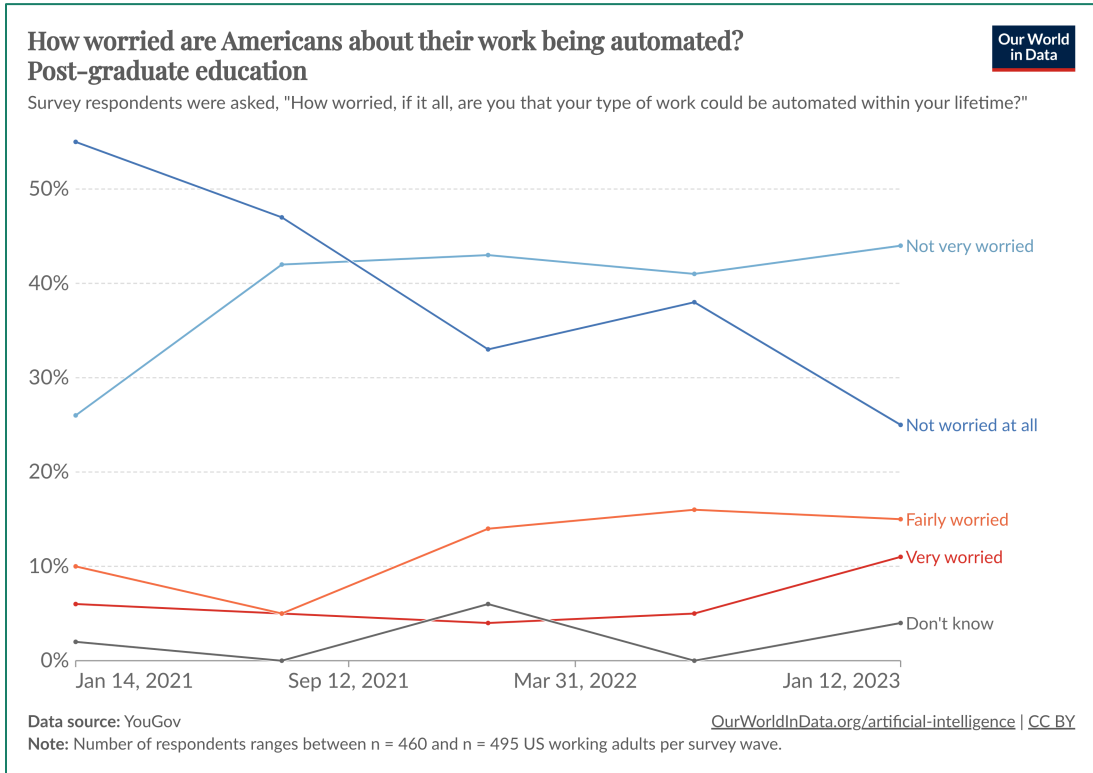
CRA Taulbee Survey (2022) via AI Index (2023) – processed by Our World in Data. "Artificial intelligence" [dataset]. CRA Taulbee Survey (2022) via AI Index (2023) [original data].

Most citizens expect AI will have positive or neutral impacts on society.

Only 16% of post-graduates (US) are worried about their jobs being automated.



Lloyd's Register Foundation (2022) – processed by Our World in Data. "Mostly help" [dataset]. Lloyd's Register Foundation (2022) [original data].



YouGov – processed by Our World in Data. "Don't know" [dataset]. YouGov [original data].

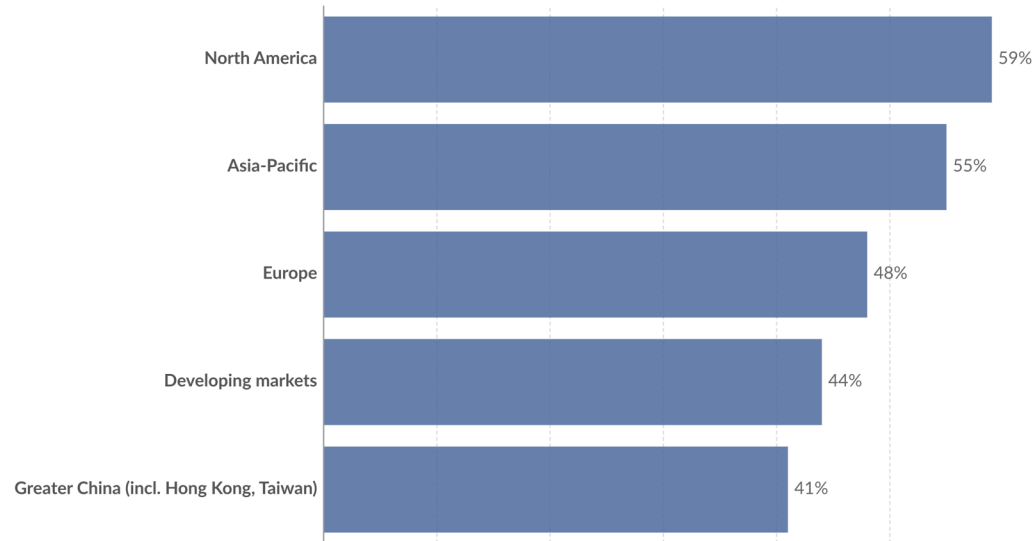
The majority of US companies are using AI in some way.

We are a subset of the field where most of the investment is going.

Share of companies using artificial intelligence technology, 2022

Share of companies using AI technology (e.g., machine learning, computer vision, or natural language processing) in at least one business function, out of 1,843 companies that responded to a global survey.

Our World in Data



Data source: McKinsey & Company via AI Index Report (2022)

OurWorldInData.org/artificial-intelligence | CC BY

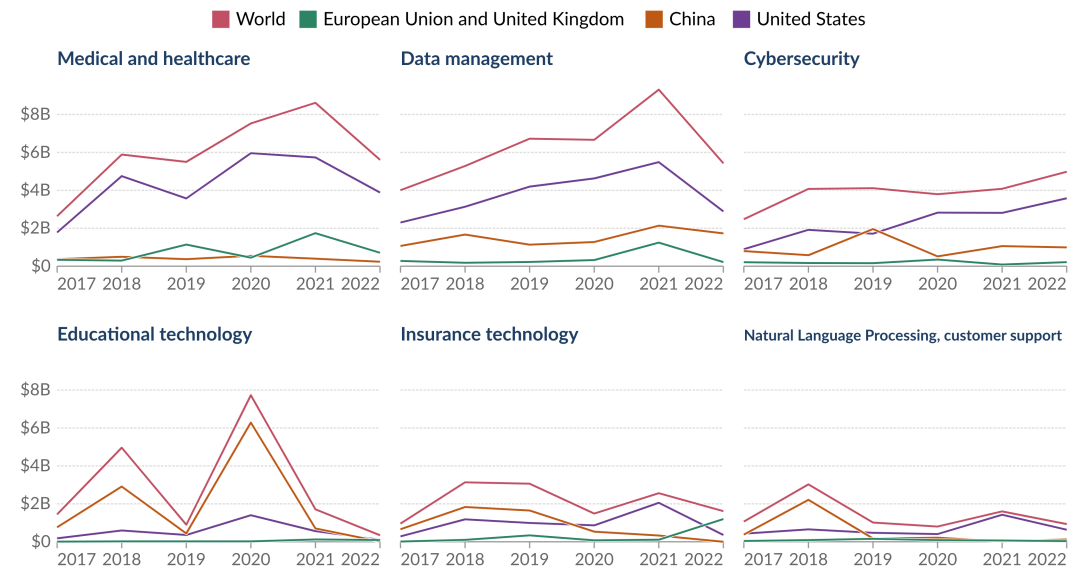
Note: Companies represent a range of industries, sizes, functional specialties, and tenures. To adjust for differences in response rates, the data are weighted by the contribution of each respondent's nation to global GDP.

McKinsey & Company Survey (2022) via AI Index (2023) – processed by Our World in Data. "AI adoption" [dataset]. McKinsey & Company Survey (2022) via AI Index (2023) [original data].

Annual private investment in artificial intelligence, by focus area

Includes companies that received more than \$1.5 million in investment. This data is expressed in US dollars, adjusted for inflation.

Our World in Data



Data source: NetBase Quid via AI Index Report (2023)

OurWorldInData.org/artificial-intelligence | CC BY

Note: Data is expressed in constant 2021 US\$. Inflation adjustment is based on the US Consumer Price Index (CPI).

NetBase Quid (2022) via AI Index (2023) – processed by Our World in Data. "World" [dataset], NetBase Quid (2022) via AI Index (2023) [original data].

Learning Objective 1

Identify the positive and negative implications of AI in mental health care

1. Administrative efficiencies
2. Client care

AI should only
improve what
humans do

01

Increase Reach

02

Early Detection

03

Personalized
Care Plans

04

Improved
Clinical Impact

Reduce Bias

05

Easier
Scheduling

06

Reduce
Documentation

07

Faster Billing

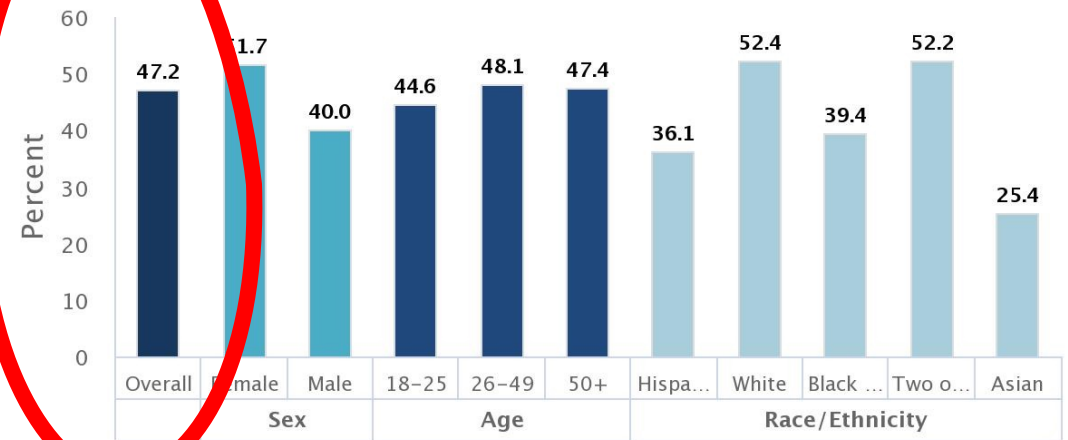
08

Increase Reach

Less than 50% of Adults in the US with AMI received mental health care.

- ▶ Sub-Clinical & Preventive Services
- ▶ 24/7 Care Plan Coaching
- ▶ Real Time Peer Connection
- ▶ Remote Therapeutic Monitoring
- ▶ Language & Cultural Responsiveness
- ▶ Community Services

Mental Health Services Received in Past Year Among U.S. Adults with Any Mental Illness (2021)
Data Courtesy of SAMHSA



Increase Reach

Digital Therapeutics

- ▶ CBT-based apps
- ▶ SHUTi
Internet-based CBTi
- ▶ Virtual Reality Exposure
Therapy
- ▶ reSET
Substance Use Disorder
treatment by Pear
Therapeutics



evidence-based therapeutic
interventions



prescribed by physicians



delivered by software programs



to prevent, manage, or treat a broad
spectrum of mental health conditions
and substance use disorders

Sidebar on Pear Therapeutics

2013	Founded by Corey McCann MD/PhD
2014	
2015	
2016	\$20M Raise
2017	reSET receives FDA clearance
2018	\$50M Raise reSET-O receives FDA clearance
2019	\$64M Raise
2020	\$80M Raise Somryst receives FDA clearance
2021	SPAC
2022	
2023	Sold assets for \$6M

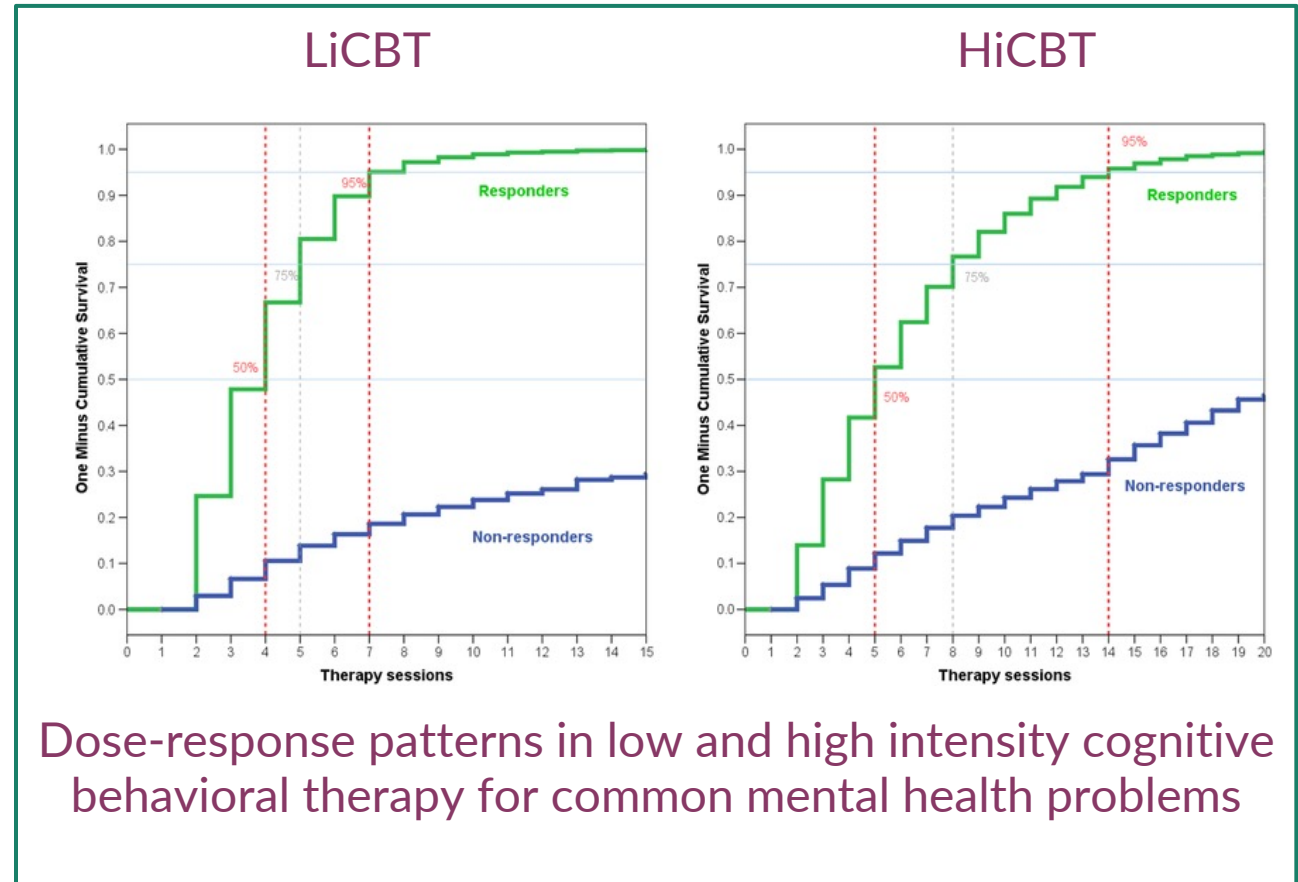
The failure of Pear was not a failure of the care model or technology. It was a failure of management:

- ▶ taking on too much risk
 - ▶ \$214M
 - ▶ SPAC
- ▶ operating an unsustainable business model
- ▶ Accepting too much friction
 - ▶ Doctors to prescribe
 - ▶ Patients to fill
 - ▶ Digital pharmacies to exist & distribute

Improve Impact

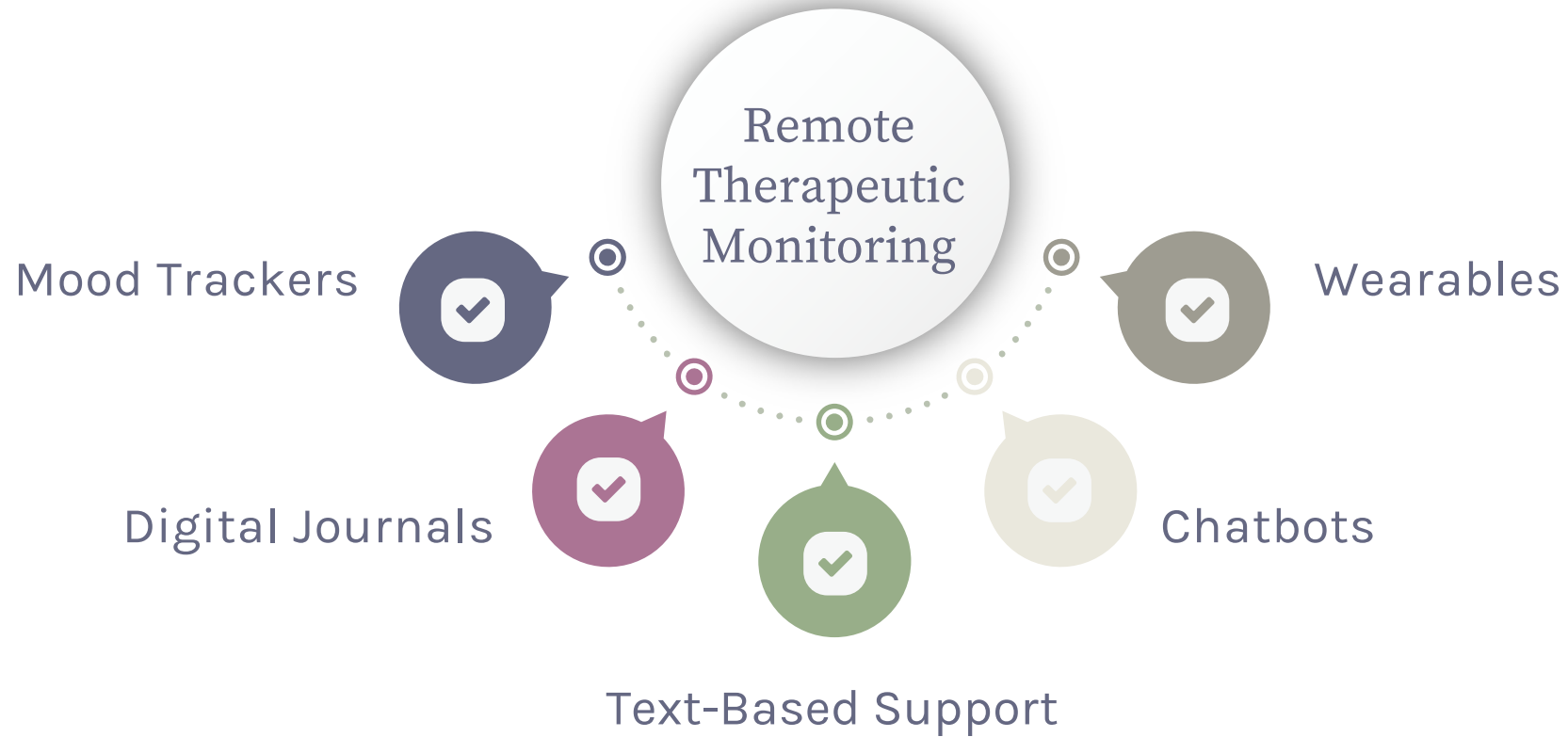
What if we knew the care pathway to remission... or cure?

- ▶ Accurate diagnosis & prioritization
- ▶ Optimal number of sessions
- ▶ Optimal constellation of encounters
- ▶ Readiness for change
- ▶ Therapeutic alliance
- ▶ Personalized care & delivery



Dose-response patterns in low and high intensity cognitive behavioral therapy for common mental health problems

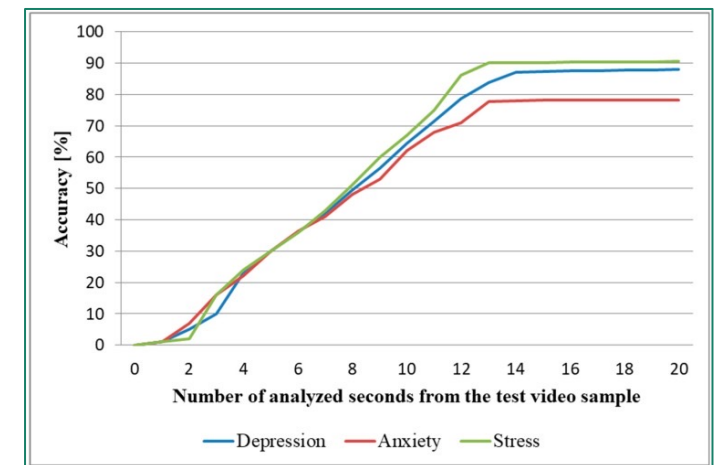
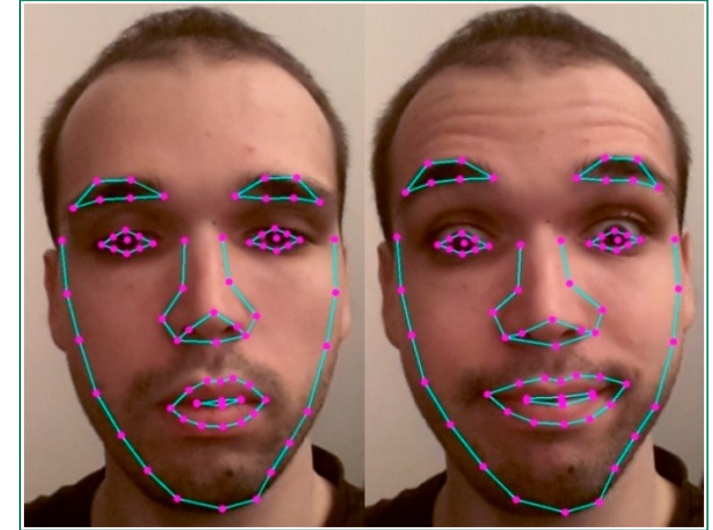
Improve Impact



the use of technology for providers to monitor patients'/clients' mental health status and the effectiveness of treatments from a distance

Early Detection & Intervention

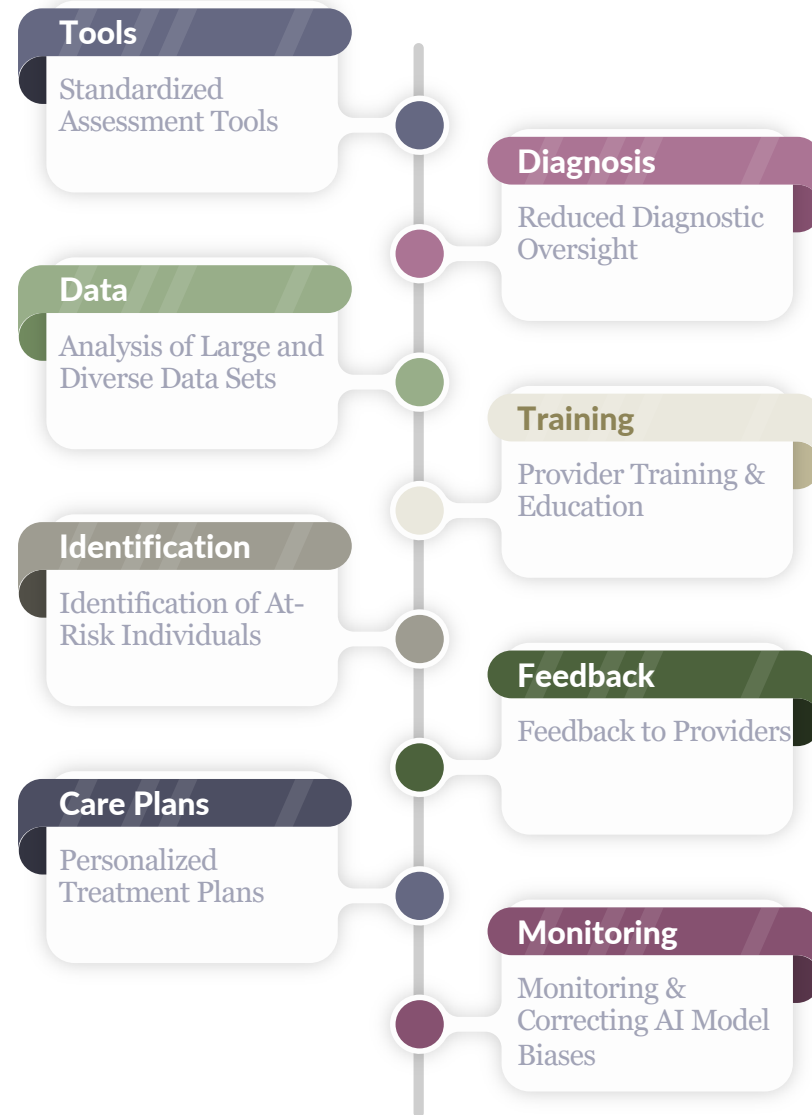
- ▶ Identify increased risk of non-remitting PTSD with a blood test
- ▶ Early detection of Alzheimer's Disease with behavioral sensor data from smartphones
- ▶ Increased accuracy & speed of diagnosis through facial expressions
- ▶ Predict responses to TMS or ECT with 90% accuracy through fMRI



AI Can Help Overcome Biases... *If we build it to.*

“The diagnosis of mental disorders almost exclusively depends on doctor–patient communication and scale analysis, which have obvious disadvantages such as patient denial, poor sensitivity, subjective biases, and inaccuracy.”

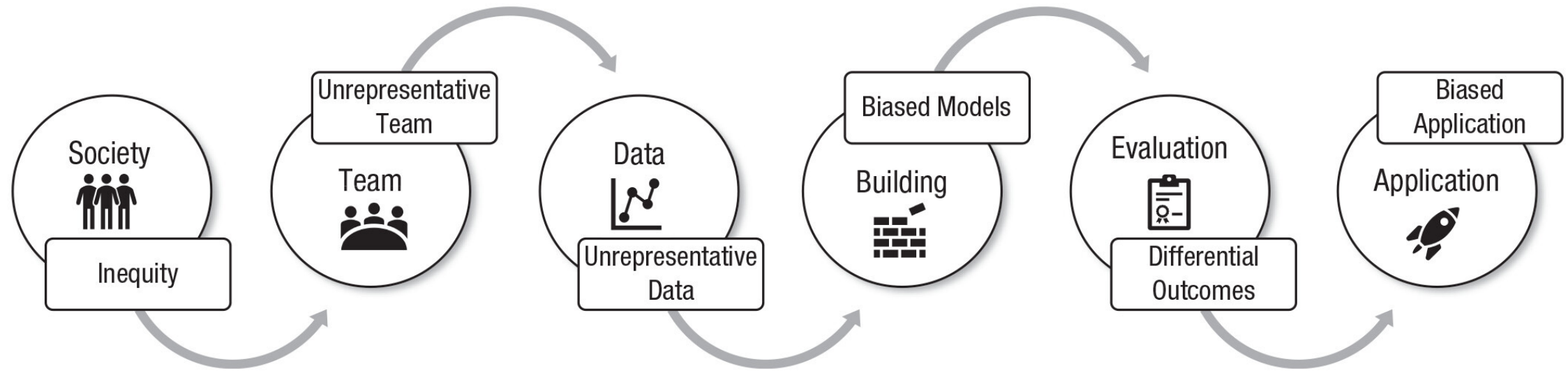
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9818923/>



Learning Objective 2

Navigate ethical considerations for counselors using AI tools in their mental health practice.

How Bias Gets Built In



AI Enablement Reality & Theory

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Artificial Super Intelligence

Artificial General Intelligence

Reasoning Systems

Domain-Specific Aptitude

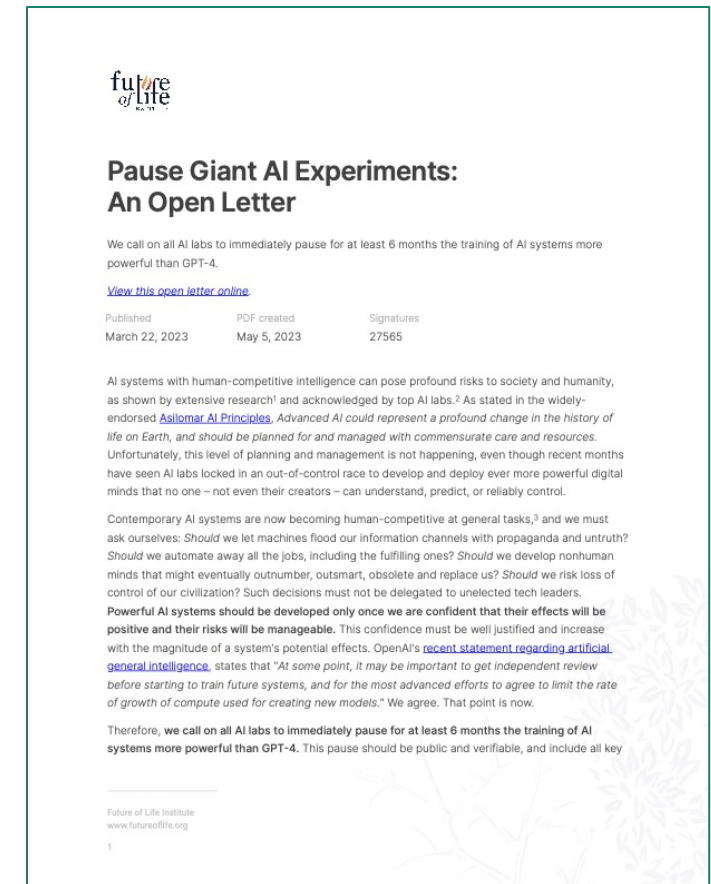
Context-Awareness & Retention

Rules-Based Systems



Key Lines from the Open Letter

- ▶ “Contemporary AI systems are now becoming human-competitive at general tasks, and we must ask ourselves: Should we let machines flood our information channels with propaganda and untruth?”
- ▶ "Should we automate away all the jobs, including the fulfilling ones? Should we develop nonhuman minds that might eventually outnumber, outsmart, obsolete and replace us? Should we risk loss of control of our civilization?”
- ▶ "Powerful AI systems should be developed only once we are confident that their effects will be positive and their risks will be manageable."



Ethical Considerations

Data Privacy & Informed Consent

- Does the client know exactly what data is being shared, with whom, and for what?

Bias

- Does the model lean in favor of any particular demographic?

Equity

- Are recommendations skewed by data that seem to support a different standard of care?

Unintended Consequences

- Vigilance in monitoring for anything unexpected

Counselor Competence

- How would the counselor know if there is bias, is recommendations are equitable, what to expect?

Ethical Quandaries for Counselors



Dr. Smith, a mental health counselor, has recently started using an AI-powered app that tracks her clients' mood patterns and provides insights to aid treatment. One of her clients, Emily, is initially enthusiastic about the app. However, as the sessions progress, Emily expresses concerns about who has access to her sensitive data, especially when she learns that the app's development company aggregates user data for research.

Where did Dr. Smith go wrong and what should she do now?

Ethical Quandaries for Counselors



Jason, a seasoned counselor, incorporates an AI tool in his practice to support his diagnostic decisions. The tool suggests a diagnosis of bipolar disorder for a new client, Kevin, based on its analysis. Jason feels that the diagnosis doesn't fully align with his clinical judgment, which suggests major depressive disorder.

Should he rely on his professional experience or follow the AI's recommendation, which might lead to a different treatment path for Kevin?

Ethical Quandaries for Counselors



Maria, a counselor working in a diverse community, uses an AI tool for treatment recommendations. One of her clients, Aisha, an immigrant, shares experiences and symptoms that the AI tool interprets and responds to inaccurately. Maria suspects that the AI's database might lack sufficient diversity in its data inputs, leading to biased outputs.

What should Maria do with this new insight into the quality of the tool?

Ethical Quandaries for Boards

The Licensing Board received a complaint about John Carter, a licensee who uses an AI-based chatbot in therapy to conduct initial assessments and provide coaching between sessions.

One of his clients, Sarah, reported feeling uncomfortable and misunderstood during her sessions. While talking with John, Sarah felt he dismissed her subtle expressions of distress and complex emotional states, instead providing generic responses. “It was like he was a robot, just repeating what my assessment and treatment plan said we should be doing” she said.

The board must now review the case to determine whether John's use of AI aligns with the ethical guidelines and standards of practice for mental health counseling.

Ethical Quandaries for Boards

The Board is reviewing a case involving Dr. Angela Reynolds, a licensed counselor who incorporated an AI-powered risk assessment tool into her practice. The tool, designed to predict the risk of self-harm or suicide in clients, was used by Dr. Reynolds to assist in evaluating clients during intake sessions.

A complaint was filed by the family of a client, Michael, who was seen by Dr. Reynolds. Michael, who had a history of depression, was assessed using the AI tool, which indicated a low risk of self-harm. Based on this assessment, Dr. Reynolds did not prioritize Michael for immediate intervention. A week later, Michael was hospitalized following a suicide attempt.

The family expressed concern that Dr. Reynolds relied on the AI tool's assessment, neglecting to consider other critical factors evident during the intake session. They felt that her decision-making was overly influenced by the tool's output, which might have missed crucial subtleties in Michael's condition that a more thorough human assessment might have caught.

Counselors

Use Tools
with
Competency

Client
Informed
Consent

Maintain
Clinical
Judgement

Provide
Feedback to
Developers

Counselor Education

Teach
Evaluation
(Not Use)

Emphasize
Research

Practical
Collaboration

Professional Associations

Establish
Guidelines &
Standards

Professional
Development

Build Multi-
Disciplinary
Coalitions

Advocacy

Licensing Boards

Regulatory
Enforcement

Licensing
Requirements

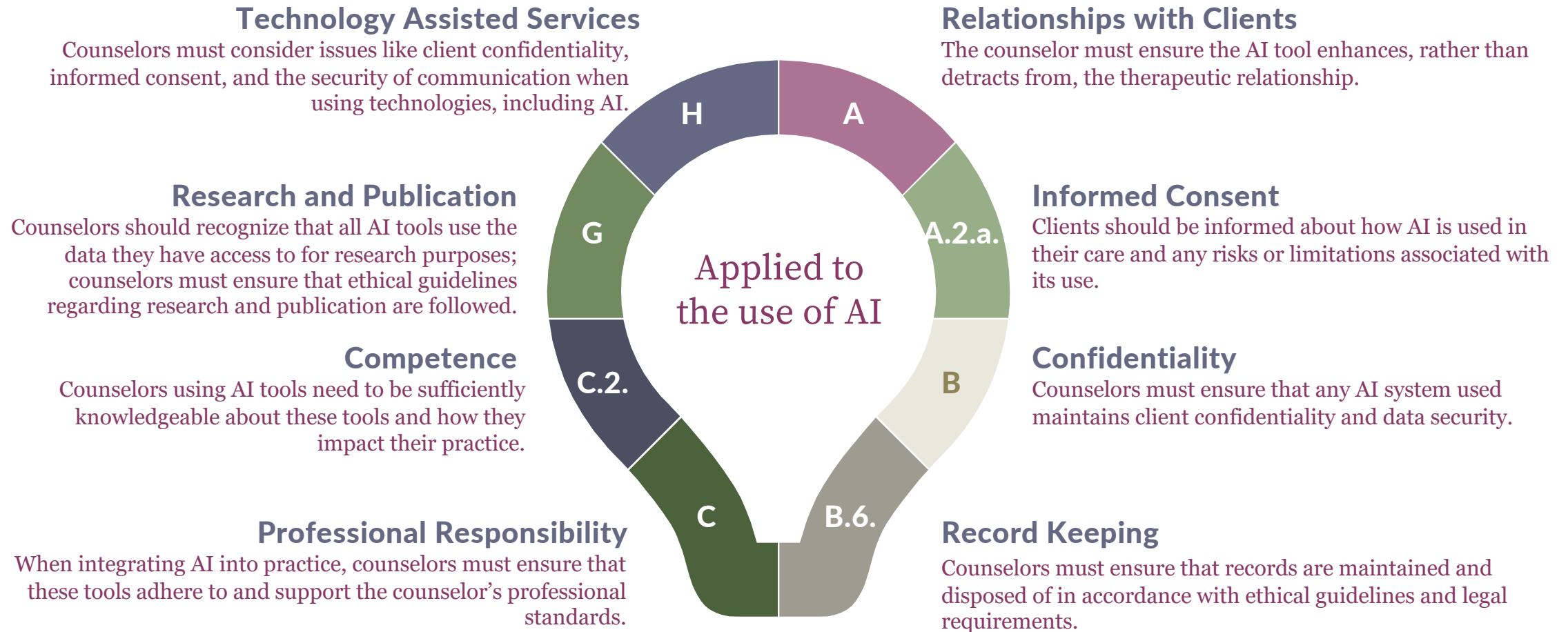
Monitoring &
Evaluation

Learning Objective 3:

Apply the Evidence-Based Practice framework to counselors using AI tools

1. Research Evidence
2. Clinical Expertise
3. Client's Values, Preferences, and Characteristics

ACA Code of Ethics, 2013



Then ChatGPT says...

The application of these standards to AI in counseling highlights the importance of ethical consideration, client welfare, confidentiality, informed consent, and professional competence. As the field of AI continues to evolve, it's likely that future iterations of the ACA Code of Ethics will include more specific guidance on the use of AI and emerging technologies in counseling.

So I asked...curiously...

What might future iterations of the
ACA Code of Ethics include?

Future iterations of the American Counseling Association's (ACA) Code of Ethics might include more detailed guidelines and standards that specifically address the use of emerging technologies like AI in counseling. These updates could encompass:

Competency

Standards requiring counselors to develop and maintain competencies in emerging technologies, including AI, as they pertain to counseling practice.

Ethical Use

Guidance on the ethical use of AI for client assessment and diagnosis, addressing potential biases and the limitations of AI tools.

Client Autonomy

Emphasizing client autonomy in the context of AI interventions, ensuring that clients have the choice to opt in or out of AI-assisted components of therapy.

Explicit Guidelines

Clear instructions on how to ethically incorporate AI tools in counseling, addressing the unique challenges and opportunities these technologies present.

Data Privacy & Security

Enhanced focus on the protection of client data in digital formats, including guidelines for using AI and other technologies that process client information.

Informed Consent

Expanded guidelines on obtaining informed consent specifically for digital and AI-based interventions, ensuring clients understand how their data will be used and the nature of AI-assisted therapy.

Cultural Competence

Ensuring that AI tools used in counseling are sensitive to and respectful of diverse cultural backgrounds and do not perpetuate biases.

Remote Counseling Skills

Further elaboration on the ethical delivery of counseling services through digital means, including the use of AI in telehealth settings.

Supervision & Training

Guidelines for the use of AI in training and supervisory contexts, ensuring that emerging professionals are adequately prepared to work with these technologies.

Research Ethics

Standards for conducting research in counseling that involves AI, ensuring ethical practices in data collection, analysis, and reporting.

Inter-Disciplinary Collaboration

Encouraging collaboration between counselors, AI developers, and data scientists to ensure that AI tools are developed and used in ways that align with counseling ethics.

These potential additions would reflect the evolving landscape of counseling in the digital age and the growing intersection between mental health services and advanced technologies. They would aim to ensure that counselors can effectively and ethically integrate these tools into their practice, enhancing the quality of care while upholding core ethical principles.

Building AI Literacy

It's just like building clinical literacy.



1 Attend trainings, workshops, conferences



2 Subscribe to trusted publications



3 Learn from your own experience

Beware of the AI panic-headline swirl.

Is the information supported by data?
That you trust?



Does the author have domain expertise?



Does the article go beyond buzz words?



Ok...so what?



AI Design Session!

● What if we could...?

● Ideation

● Prototype

● Iteration





Thank You!

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