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Navigating the Behavioral Health Al Journey from Concept to Reality

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Welcome!

We invite all attendees to *please enter questions in the chat* as we talk through the discussion.

Presenters may address questions immediately, but we plan to leave 10-15 minutes at the end of the presentation for questions and discussion.

Thank you for joining!





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Today's Agenda

Al Fundamentals in HHS

- 1. Defining AI and Key Concepts
- Opportunity for AI in Health and Human Services

Activating AI:

- 3. Al Readiness Management Framework
- 4. Al Trust, Ethics and Governance
- Behavioral Health AI Roadmap and Demonstration
- 6. Enabling Evidence-based Practices



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AI Fundamentals in HHS

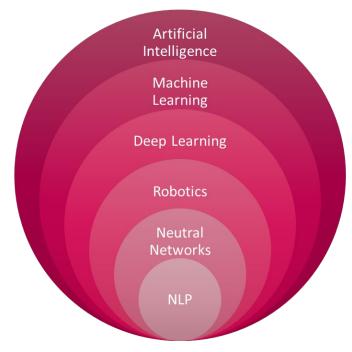


What is Artificial Intelligence (AI)?

"The capability of computer systems or algorithms to imitate intelligent human behavior."

- Merriam-webster.com

- Understanding language
- Reasoning
- Navigating the physical world
- Learning



Top Subsets of AI

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Narrow AI vs. General Purpose AI

A Purpose General

Intelligence of machines that allows them to comprehend, learn, and perform intellectual tasks much like humans. Focused on specific limited tasks.

Examples – image recognition, chatbots

Narrow

Key Concepts in AI

Machine Learning

Training algorithms to learn from and make predictions or decisions based on data.

Deep Learning

Uses neural networks with many layers (deep networks) to analyze various forms of data. It's particularly useful for complex tasks such as image and speech recognition.





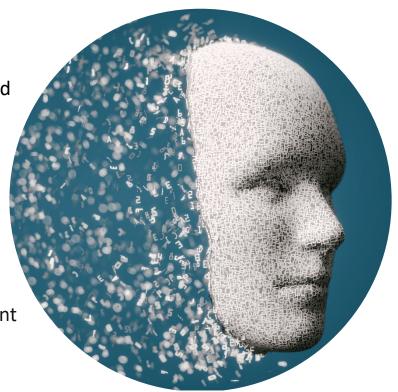
Key Concepts in AI

Natural Language Processing

NLP is a branch of AI focused on interacting computers and humans through natural language. It involves tasks like language translation, sentiment analysis, and speech recognition.

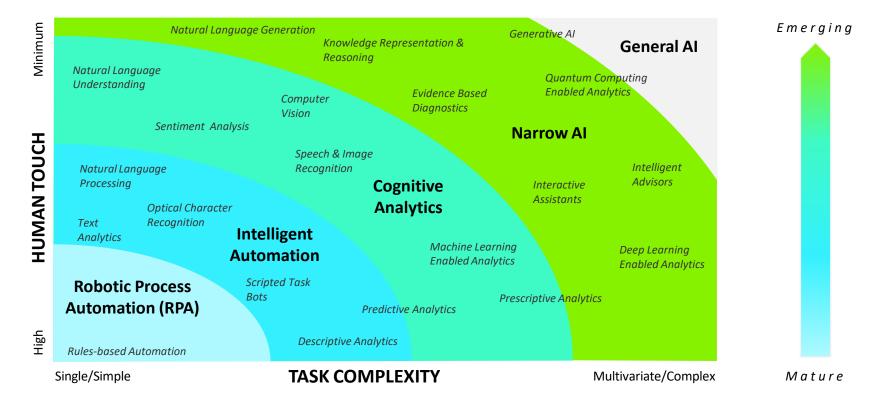
Large Language Model

Category of foundation models trained on immense amounts of data making them capable of understanding and generating natural language and other types of content to perform a wide range of tasks..





The Artificial Intelligence (AI) Spectrum



What's Our Mission For Utilizing Al?



Act as a **force multiplier** for our people



Reduce the **burden** of human interaction for many types of tasks



Use technologies to **guide decisions** and focus on critical tasks

Summarization Textual Content Generation Generate a concise and coherent summary of a Generate content based on a set of input examples, long text, a collection of texts, data documents, data and/or a specific theme or topic E.g., legislation, news summaries, etc. E.g., trends report generation, census data, needs assessment findings Q&A Reasoning Generate logical analysis (inference, Generate an answer to a question based on a given text or a knowledge base deduction and/or explanation of relations) given a context or knowledge base E.g., policy document review, search, chatbot E.g., legislation impact analysis **Content Transformation Image Generation** Generate content by converting it into a new Generate images from text prompts specified type, format or style (descriptions, edits, etc.) </>> E.g., text to code, style transfer and E.g., training data augmentation for computer personalization, text to table vision models, Deloitte Orb Energizer **Extraction** Classification ••• Generate specific information or entities from a given input Generate a category or label to a given input E.g., tax form key information extraction, data extraction from



news for CI database



E.g. policy identification, vendors classification

Al in Healthcare: Current Use Cases

Here are **five use cases** depicting how organizations – including government agencies – are harnessing the power of AI to improve organizational efficiencies and drive digital transformation in health:

Pushing Back on Paper **Pushing**

Claims Processing Back Office Automation.

Tackling Problems Before they Become Crises

Health and **Environmental** Predictions.

Medical **Breakthroughs** at Record Speed

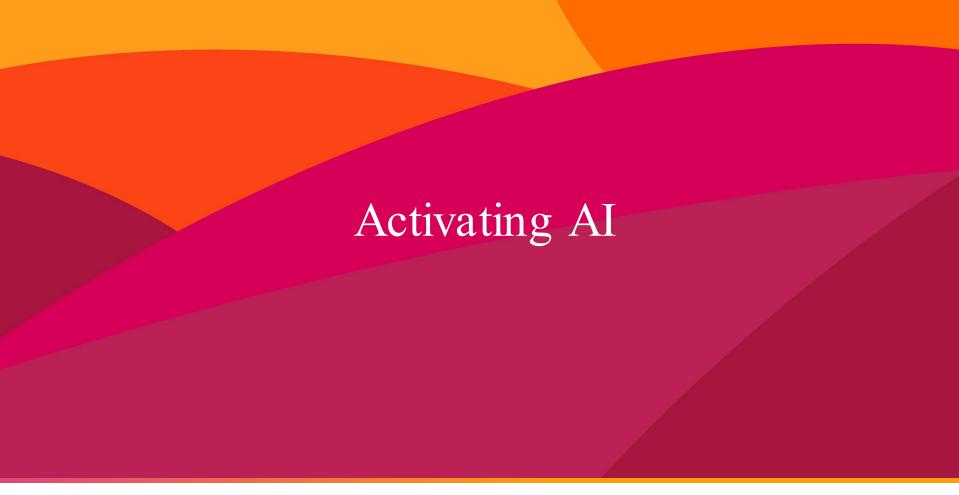
Biomedical Data Science

Getting in Front of Social **Problems**

Population Risk Support.

Analyzing the Impact of **Federal Policies**

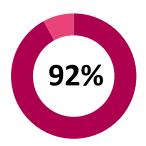
Policy Impact Analysis on Operations.



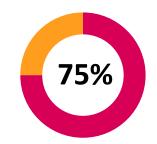


How are organizations using AI?

Looking across different sectors, several common trends emerge – organizations are beginning to use AI to make their operations more efficient, improve employee job satisfaction and increase the quality of services offered.



of healthcare leaders see promise in Generative AI for improving efficiencies as well as enabling quicker decision-making (65%)



of leading healthcare companies are experimenting with or planning to scale Generative AI across their enterprise

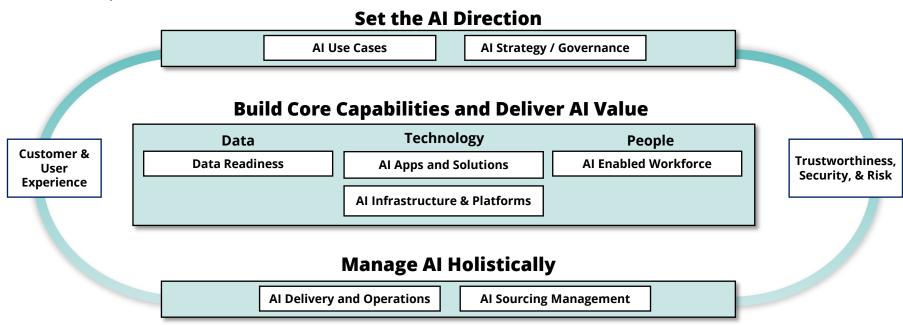


of government organizations are still at the initial or developing digital maturity stages; most believe that Al can positively impact efficiencies and outcomes



Al Readiness and Management Framework (aiRMF)

Deloitte's aiRMF approach can help organizations to assess where they are, define target outcomes and chart a path forward





Deloitte's Trustworthy Al

Utilizing a Trustworthy AI Framework helps organizations develop ethical safeguards across 6 key dimensions to define your AI approach to executing governance and innovation side by side. Our frameworks helps to ensure the technology is:

FAIR / IMPARTIAL

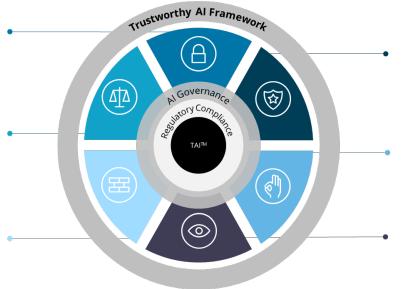
Have you implemented policies and controls to avoid discriminatory bias?

TRANSPARENT & EXPLAINABLE

Are your models explainable? Can you monitor your Al Systems?

RESPONSIBLE & ACCOUNTABLE

Have you assigned accountability and ownership in a responsible way?



ROBUST/RELIABLE

Are your models producing reliable and consistent outputs?

PRIVACY

Are you respecting consumer privacy? Are you not using customer data beyond its intended and stated use?

SAFE & SECURE

Have you created new security risks? Is your solution safe from both a digital & physical standpoint?



Trust leaders unlock greater AI adoption

When trust is high....

Clients are

1.9x

More likely to engage with Al¹

Workers are

2.6x

More likely to **report feeling comfortable using AI tools** by their employer²

¹ Based on the Deloitte TrustID Brand Index study of 60,000 customer responses across 150 brands conducted in January 2024

 $^{^{2}}$ Based on a study across 1,500 employees across 9 sectors conducted in January 2024

Behavioral Health Al Roadmap

5 AI solutions that can impact providers now and in the near term







Al and Evidence-based Best Practices

- Integration of artificial intelligence into evidence-based practice has the
 potential to improve outcomes, lead to more accurate and precise
 diagnoses, individualized treatment plans, and improved individual/family
 and provider experience.
- A more accurate and precise diagnosis can enhance the clinical decisionmaking process that can lead to the best intervention/evidence best practice to use with individuals and families.
- AI can support evidence best practices implementation by monitoring fidelity and provide ongoing assessment on best intervention/evidence best practices.



Thank you

What questions do you have?



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