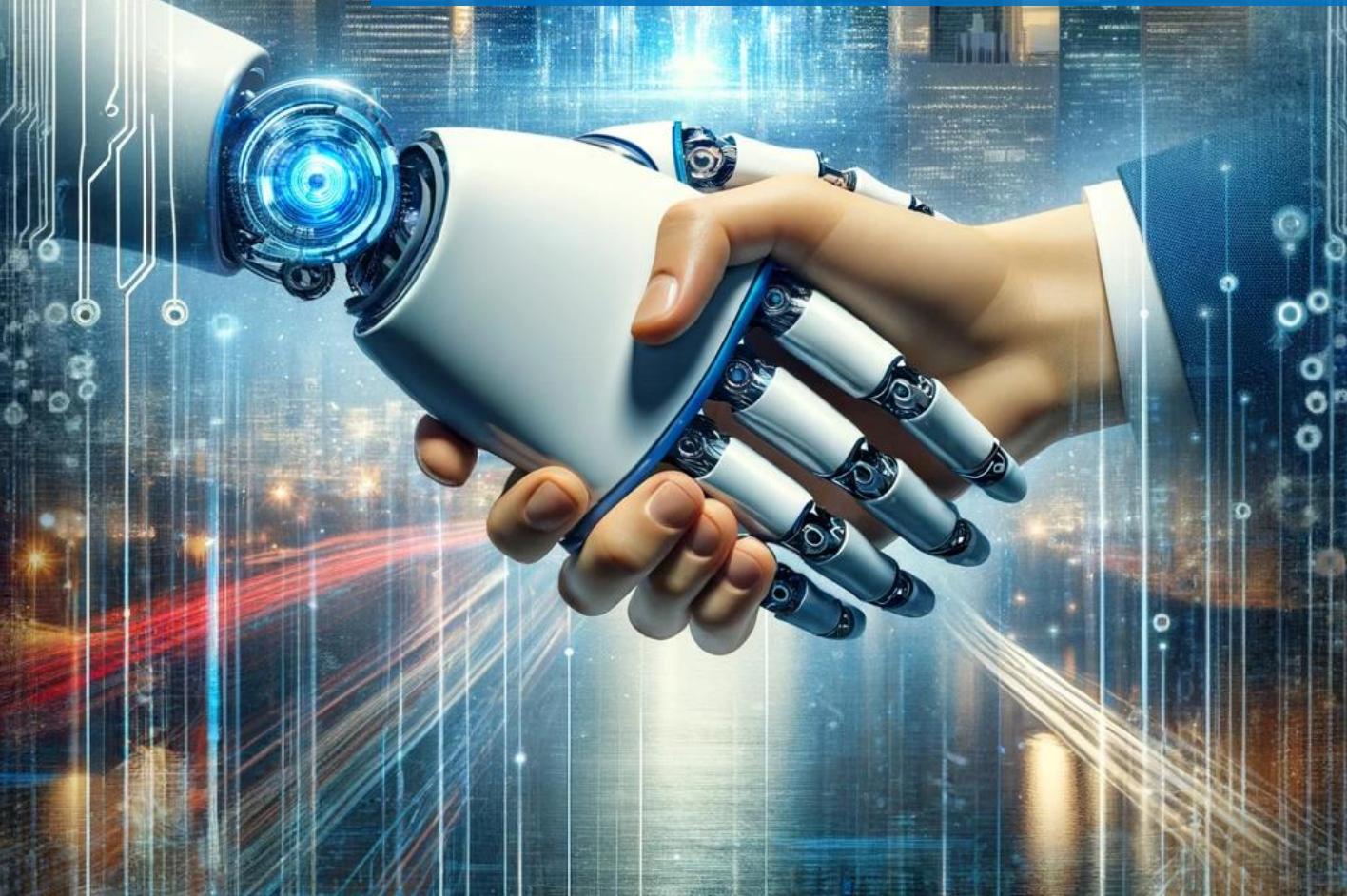


# UNDERSTANDING ARTIFICIAL INTELLIGENCE





## Consulting

Unlock the Potential of AI with ReallyEasy.AI: Your Partner for Tailored AI and Machine Learning Solutions. We specialize in crafting and streamlining AI and ML operations to power your business forward.



## Certifications

Elevate Your Business with Certified Expertise from ReallyEasy.AI. Our team boasts professionals with prestigious certifications such as AWS Machine Learning, Azure Data Scientist, and Azure AI Engineer. This diverse and recognized skill set ensures that we bring the most current and effective AI solutions to your business challenges. Trust us to deliver excellence and innovation, leveraging our certified expertise to drive your success.



## Training

Empower Your Future with ReallyEasy.AI Training: Dive into the World of AI and Machine Learning. Our interactive workshops are designed for hands-on learning, offering direct engagement with cutting-edge AI technologies. Whether you're a beginner or an advanced learner, our expert-led sessions provide the tools and knowledge to transform your understanding and application of AI.

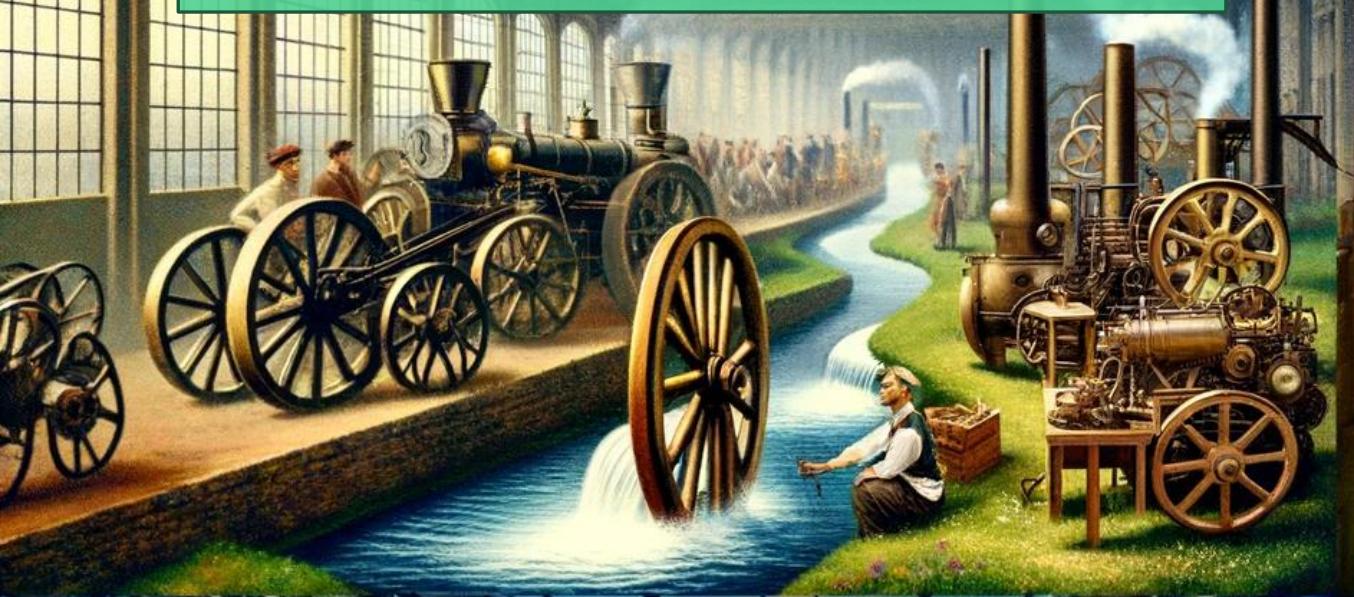


"Some people call this artificial intelligence, but the reality is this technology will enhance us. So instead of artificial intelligence, I think we'll augment our intelligence."

- Ginni Rometty, Former CEO IBM



## 1.0 Mechanization, Steam, and Water Power



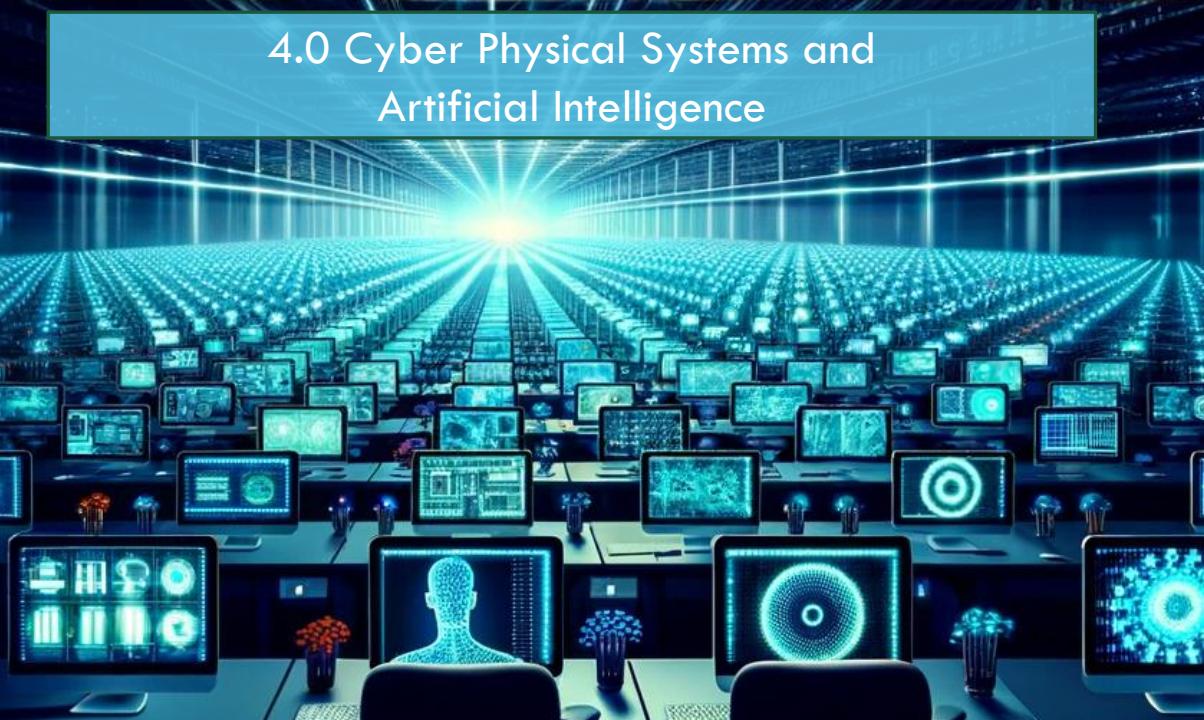
## 2.0 Mass Production and Electricity



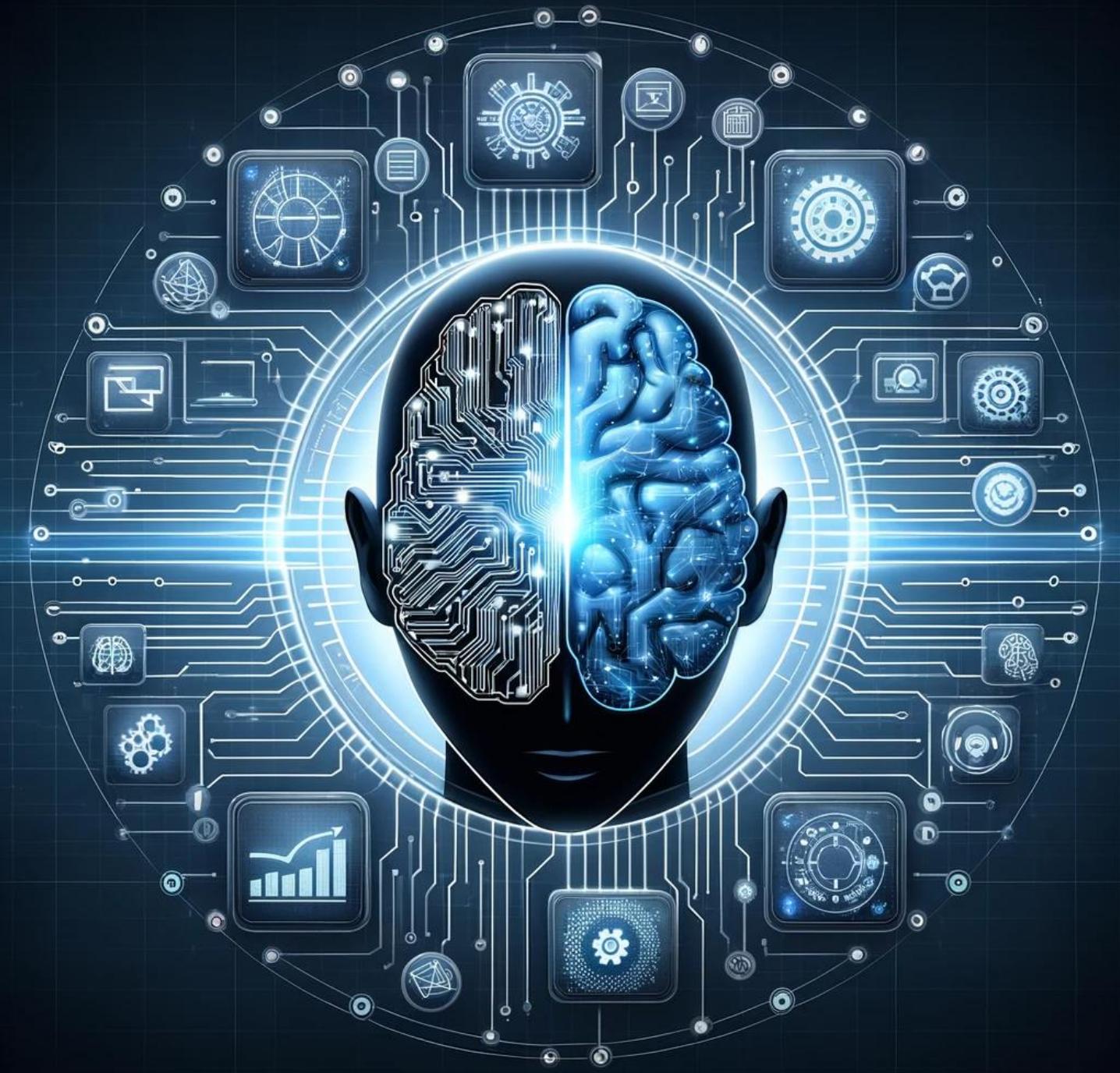
## 3.0 Electronic / IT Systems and Automation

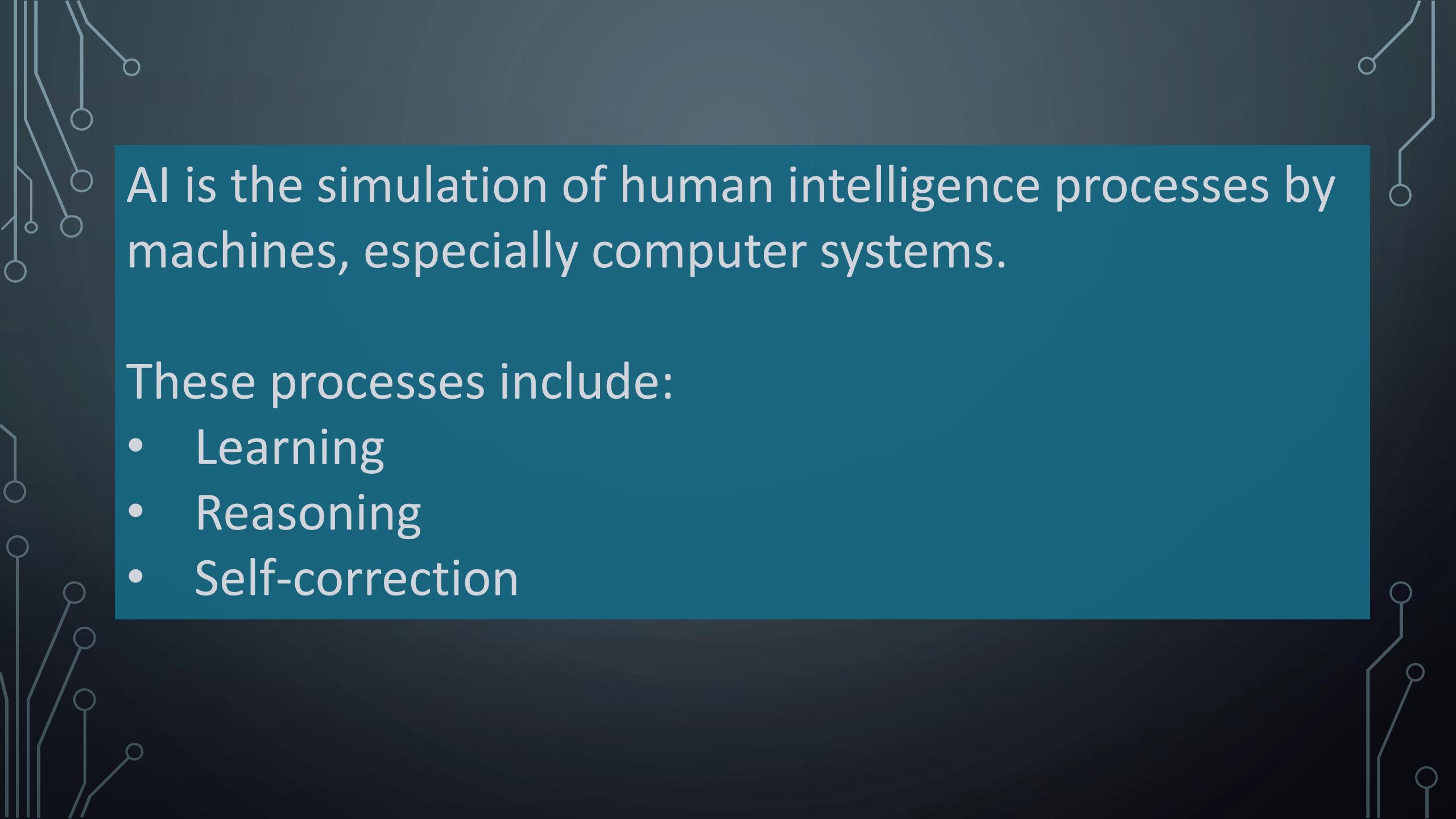


## 4.0 Cyber Physical Systems and Artificial Intelligence



# WHAT IS AI?

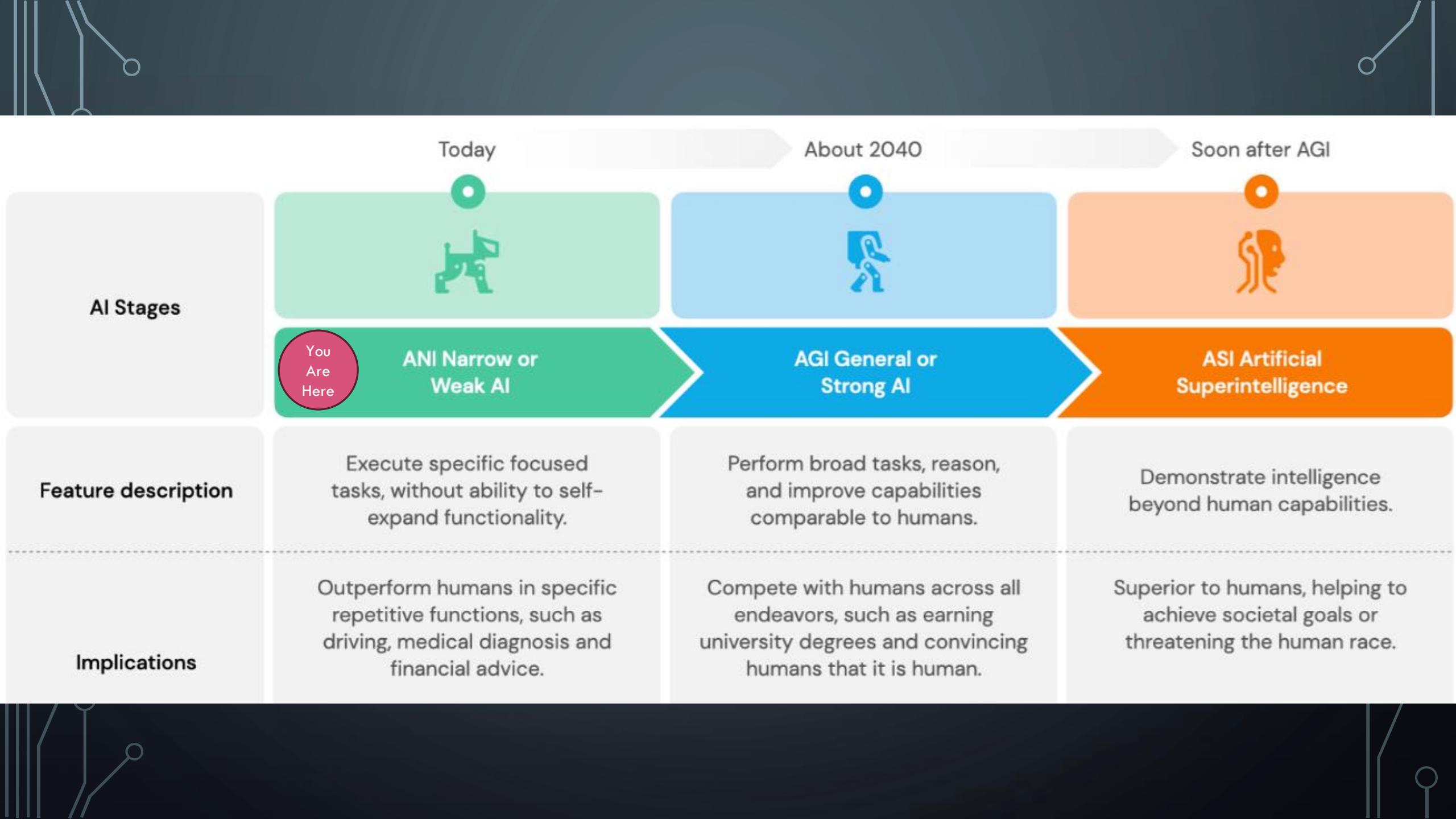


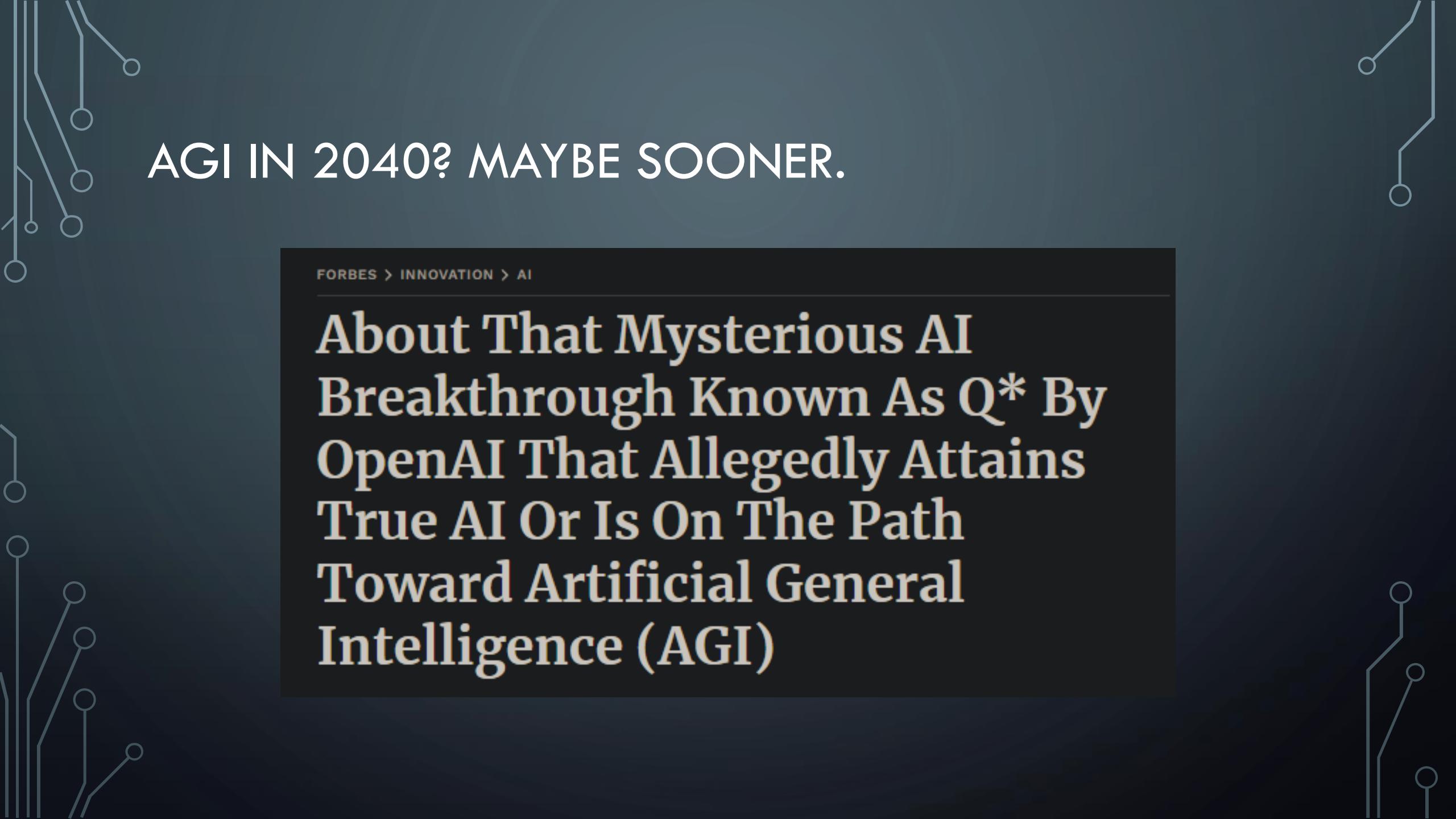


AI is the simulation of human intelligence processes by machines, especially computer systems.

These processes include:

- Learning
- Reasoning
- Self-correction





AGI IN 2040? MAYBE SOONER.

FORBES > INNOVATION > AI

# About That Mysterious AI Breakthrough Known As Q\* By OpenAI That Allegedly Attains True AI Or Is On The Path Toward Artificial General Intelligence (AGI)

# The Seven Patterns of AI

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Hyper-Personalization

Recognition

Patterns & Anomalies

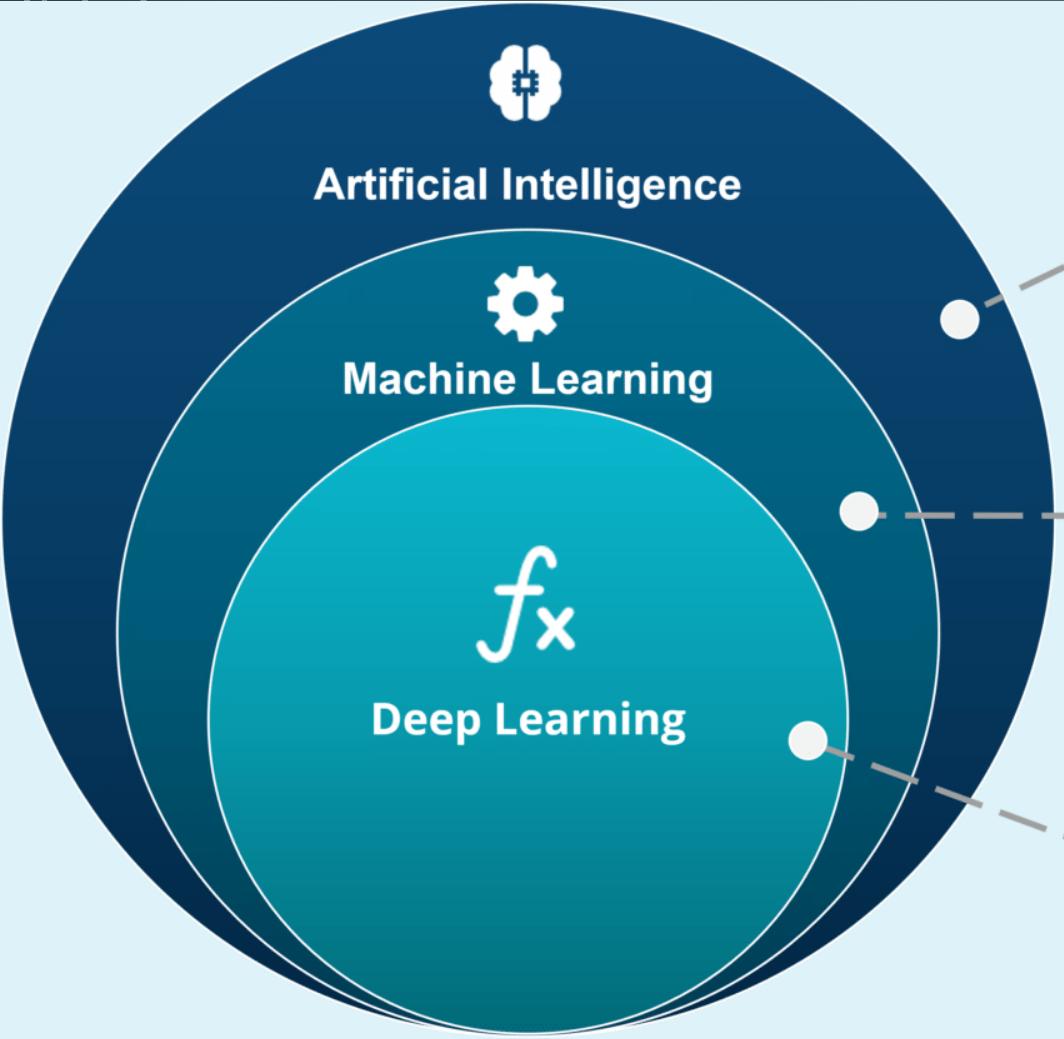
Conversation & Human Interaction

Autonomous Systems

Predictive Analytics & Decisions

Goal-Driven Systems





## ARTIFICIAL INTELLIGENCE

A technique which enables machines to mimic human behaviour

## MACHINE LEARNING

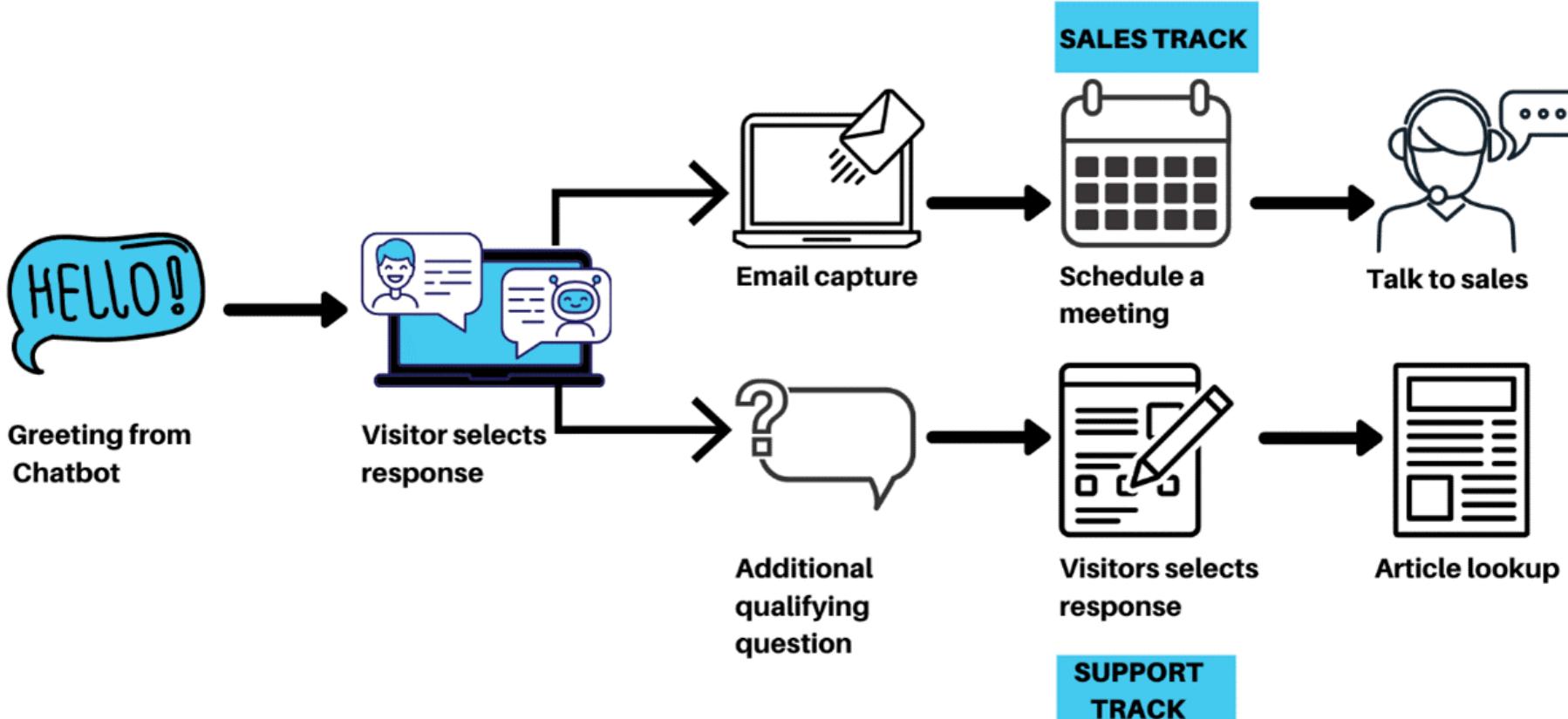
Subset of AI technique which use statistical methods to enable machines to improve with experience

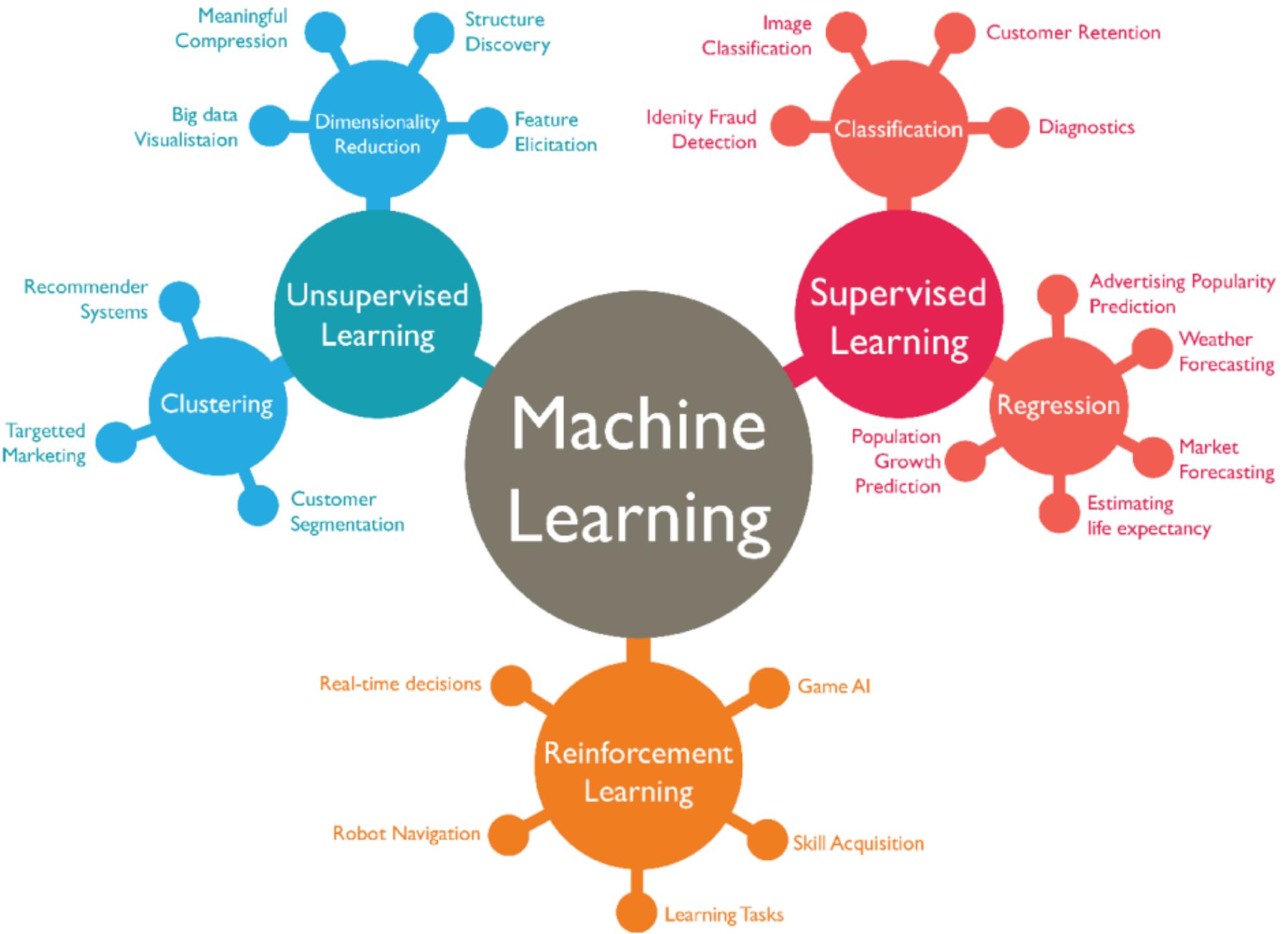
## DEEP LEARNING

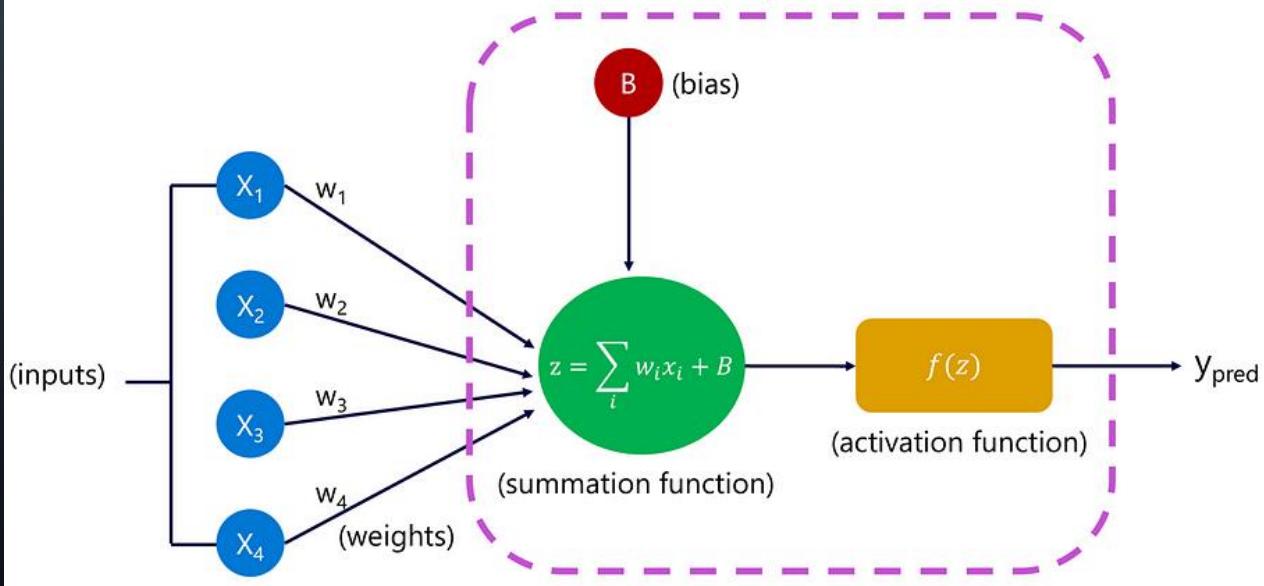
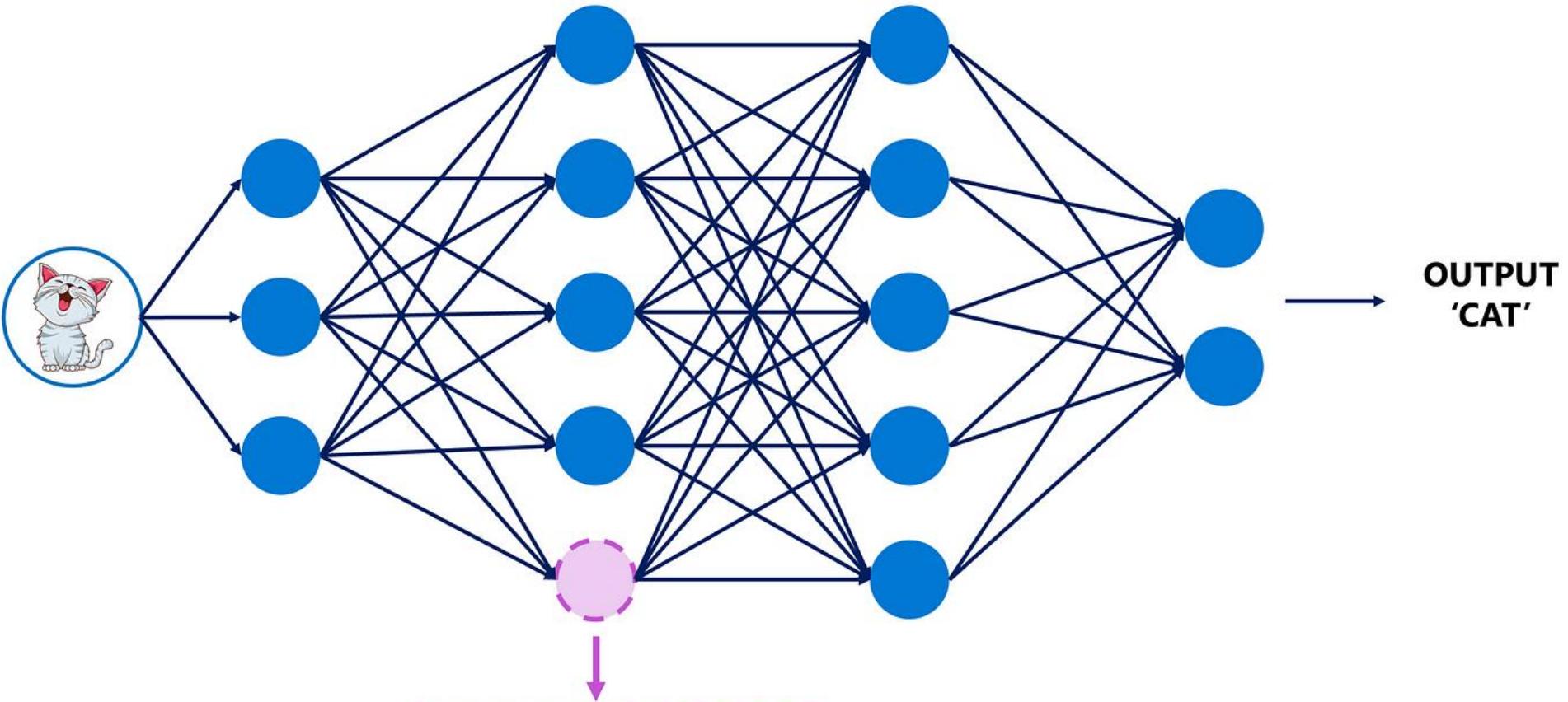
Subset of ML which make the computation of multi-layer neural network feasible

# SIMPLE AI: RULES-BASED

## HOW A RULE -BASED CHATBOT WORKS







# SUPER DUPER CRAZY TECH: TRANSFORMERS

(MORE THAN MEETS THE EYE)

## Attention Is All You Need

Ashish Vaswani\*  
Google Brain  
[avaswani@google.com](mailto:avaswani@google.com)

Noam Shazeer\*  
Google Brain  
[noam@google.com](mailto:noam@google.com)

Niki Parmar\*  
Google Research  
[nikip@google.com](mailto:nikip@google.com)

Jakob Uszkoreit\*  
Google Research  
[usz@google.com](mailto:usz@google.com)

Llion Jones\*  
Google Research  
[llion@google.com](mailto:llion@google.com)

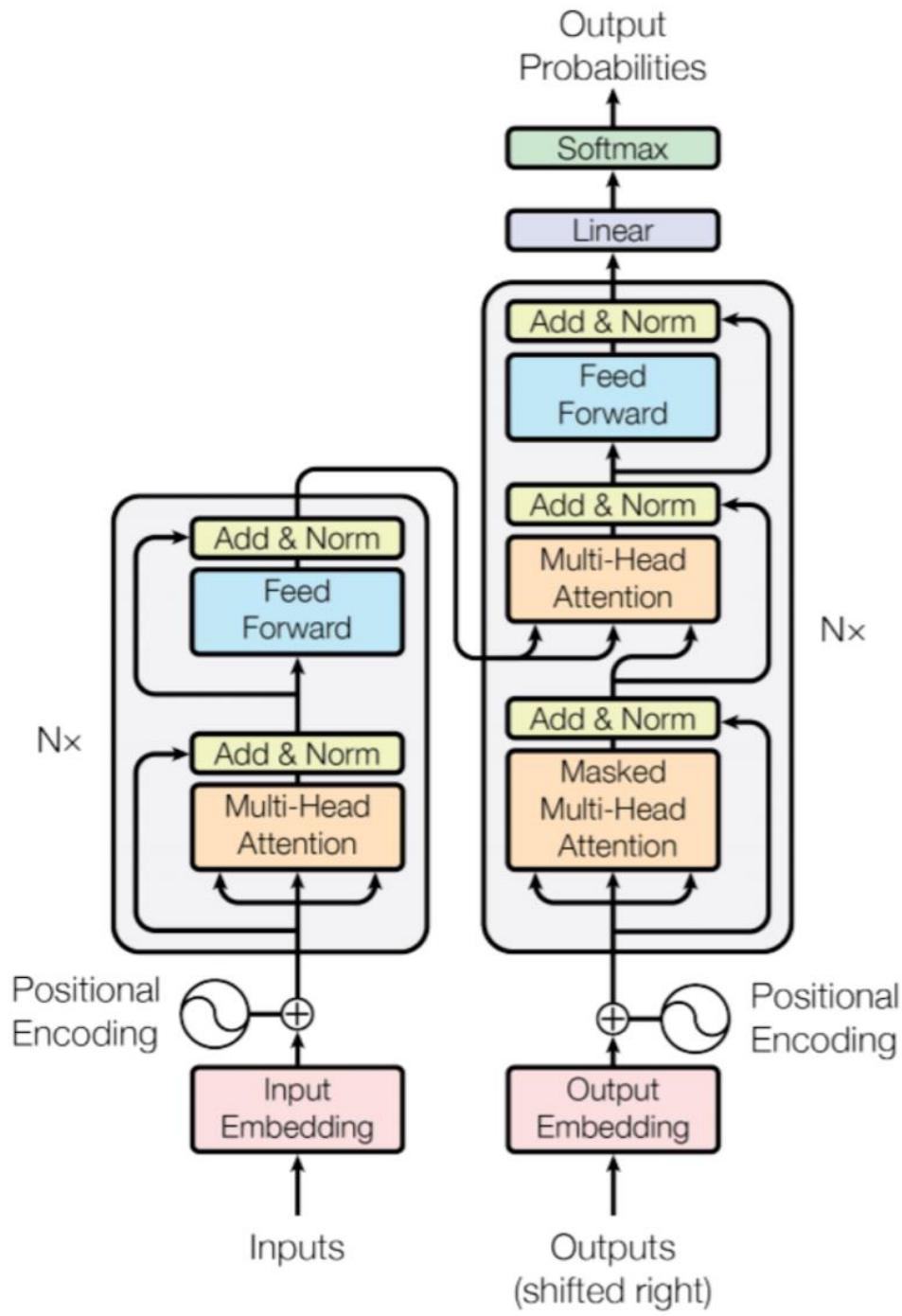
Aidan N. Gomez\* †  
University of Toronto  
[aidan@cs.toronto.edu](mailto:aidan@cs.toronto.edu)

Lukasz Kaiser\*  
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[lukasz.kaiser@google.com](mailto:lukasz.kaiser@google.com)

Illia Polosukhin\* ‡  
[illia.polosukhin@gmail.com](mailto:illia.polosukhin@gmail.com)

### Abstract

The dominant sequence transduction models are based on complex recurrent or convolutional neural networks that include an encoder and a decoder. The best performing models also connect the encoder and decoder through an attention mechanism. We propose a new simple network architecture, the Transformer, based solely on attention mechanisms, dispensing with recurrence and convolutions entirely. Experiments on two machine translation tasks show these models to be superior in quality while being more parallelizable and requiring significantly less time to train. Our model achieves 28.4 BLEU on the WMT 2014 English-to-German translation task, improving over the existing best results, including ensembles, by over 2 BLEU. On the WMT 2014 English-to-French translation task, our model establishes a new single-model state-of-the-art BLEU score of 41.8 after training for 3.5 days on eight GPUs, a small fraction of the training costs of the best models from the literature. We show that the Transformer generalizes well to other tasks by applying it successfully to English constituency parsing both with large and limited training data.





## ChatGPT

"GPT" stands for "Generative Pre-trained Transformer". This name describes the model's key characteristics:

- **Generative:** It can generate text, creating coherent and contextually relevant content based on the input it receives.
- **Pre-trained:** Before being fine-tuned for specific tasks, it undergoes a comprehensive training process on a vast dataset, allowing it to understand and generate human-like text.
- **Transformer:** This refers to the type of neural network architecture it uses, which is especially effective in understanding the context and relationships in language.

# RELATIVE COMPARISON OF AI DEPLOYMENTS



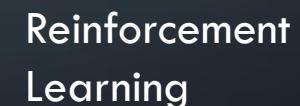
Supervised  
Learning



Unsupervised  
Learning



Generative AI

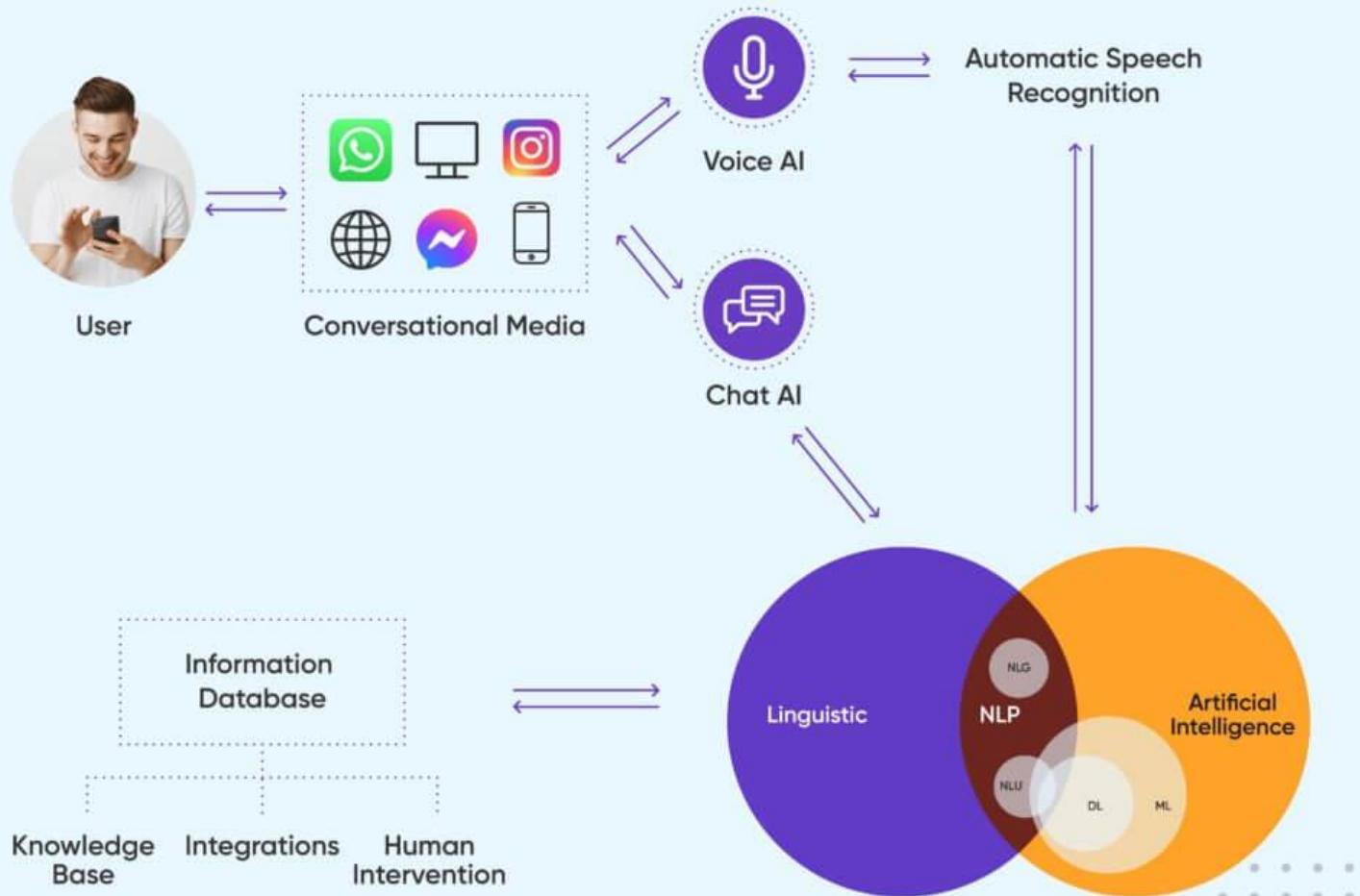


Reinforcement  
Learning

# TOP USE CASES FOR AI 2024



## A depiction of how AI uses different tech to make human-like conversations



## Use Cases of Generative AI based Insurance Chatbot



Policy  
information



Personalized  
quotes



Cross compare  
insurance  
products



User behavior  
questions



Answers versions  
variations

# GPT-4 Passes the Bar Exam: What That Means for Artificial Intelligence Tools in the Legal Profession

April 19, 2023 | By Pablo Arredondo, Q&A with Sharon Driscoll and Monica Schreiber

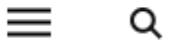
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# Leading generative AI use cases of interest

% cited by Legal professionals





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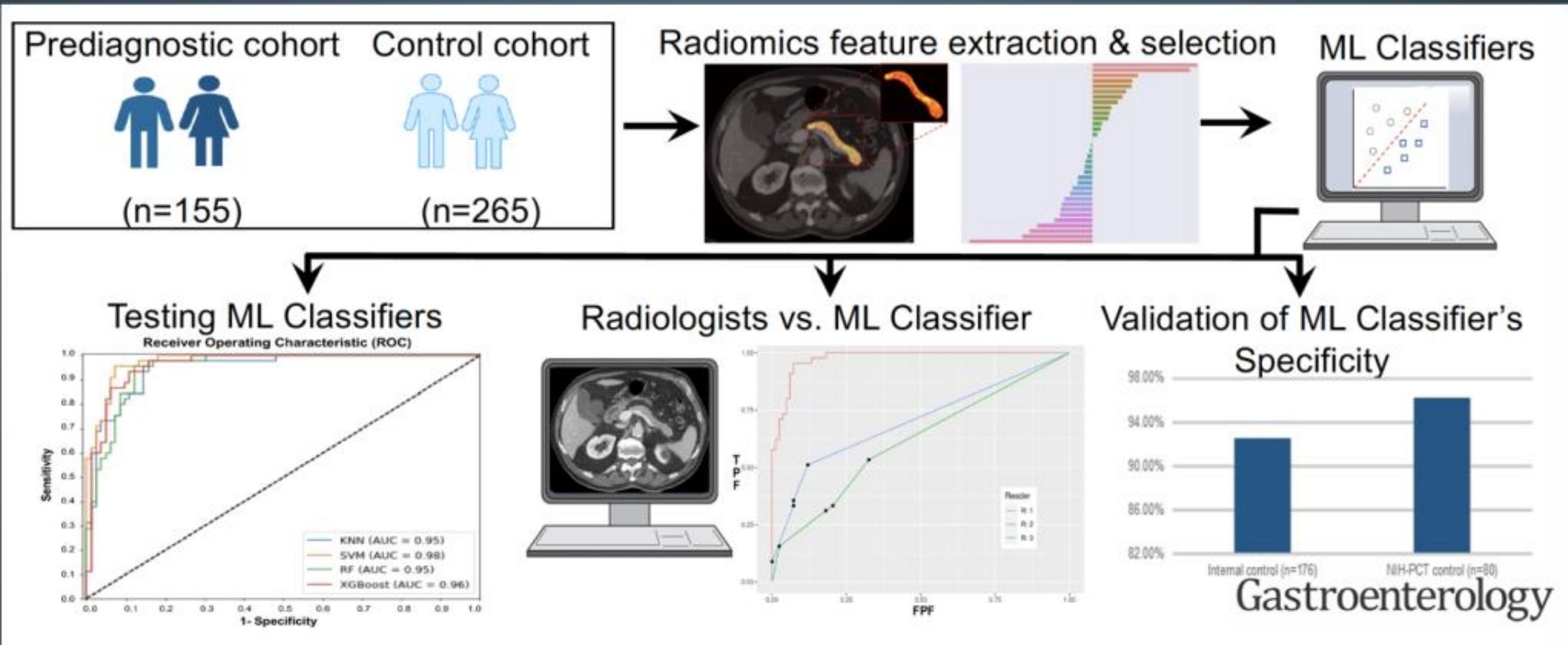
# The newest version of ChatGPT passed the US medical licensing exam with flying colors — and diagnosed a 1 in 100,000 condition in seconds

Hilary Brueck Apr 6, 2023, 3:03 PM CDT



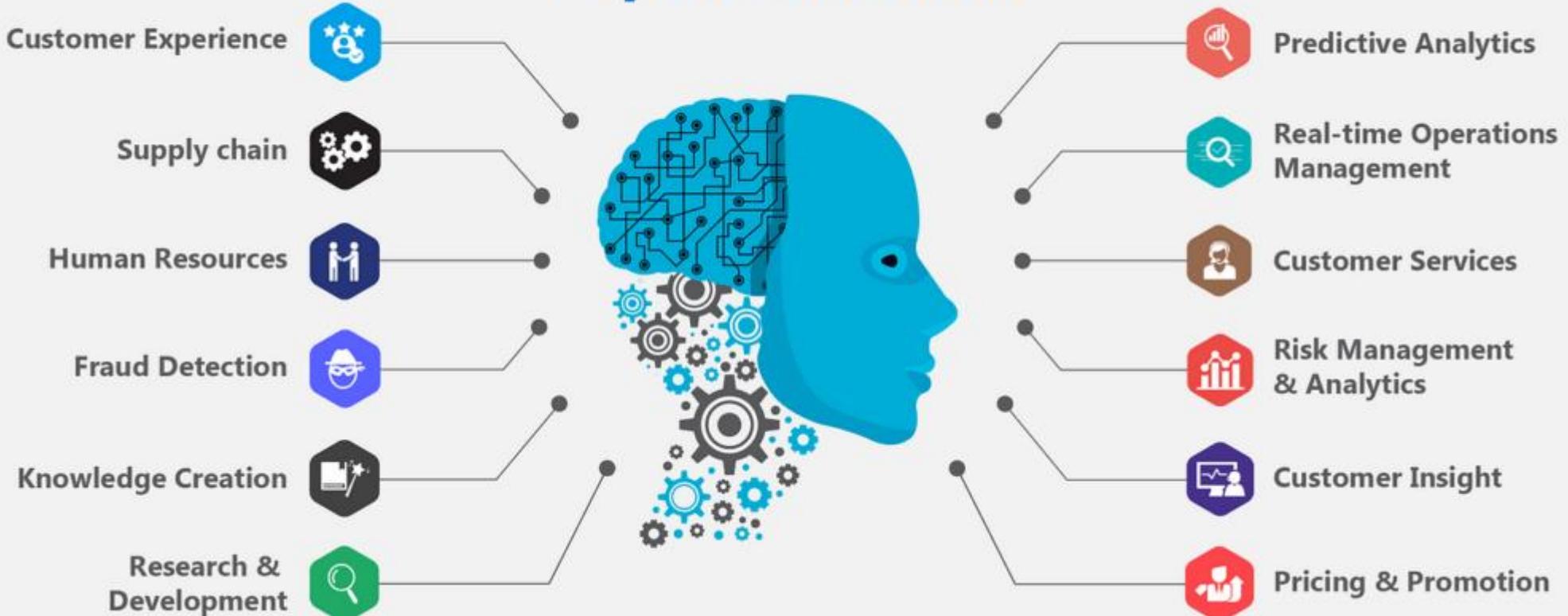
Mayo Clinic and GE HealthCare enter strategic collaboration to advance innovation in medical imaging and theranostics

Sep 14, 2023



# EVERYTHING ELSE...

## Top AI Use Cases



# GEN AI SHOWCASE



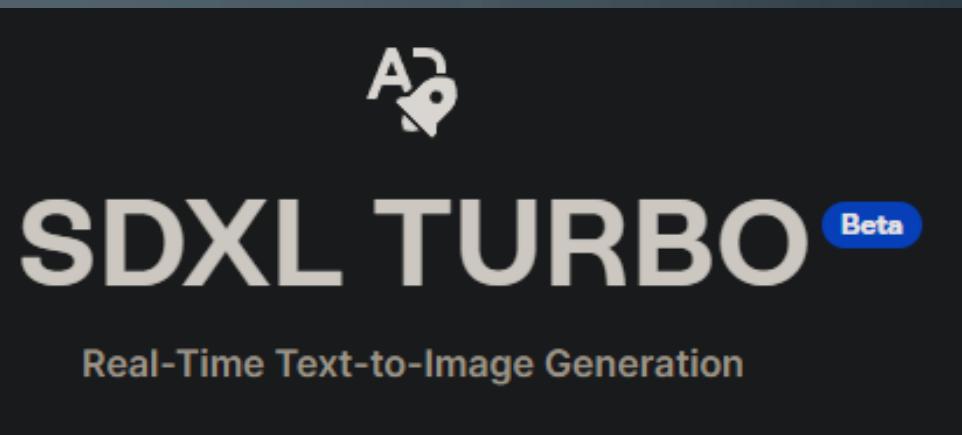
## TEXT CHAT – THE BIG ONE + THE OTHER TWO



IMAGES

# DALL-E 3

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Real-Time Text-to-Image Generation

# VOICE / AUDIO

- Text-to-Speech
- Speech-to-Speech
- Speech-to-Text



ars TECHNICA

21ST CENTURY NATURE DOCUMENTARY —

## Unauthorized “David Attenborough” AI clone narrates developer’s life, goes viral

"We observe the sophisticated *Homo sapiens* engaging in the ritual of hydration."

BENJ EDWARDS - 11/16/2023, 3:45 PM

A screenshot of a Mac OS X desktop. In the foreground, a video frame shows a man's face. In the background, a terminal window titled "judge.py" is open, displaying Python code. The code includes a loop that repeatedly saves frames with the command "Say cheese! Saving frame.". The terminal also shows the output of this command multiple times. The status bar at the bottom indicates "Wed Nov 16 03:45:00".

# SENSORY / PHYSICAL INTERACTION

ARTIFICIAL GENERAL INTELLIGENCE

## Unveiling Sensory AI: A Pathway to Achieving Artificial General Intelligence (AGI)



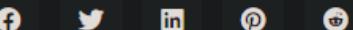
Published 1 week ago on November 21, 2023  
By Antoine Tardif

## Generative AI in Physiotherapy

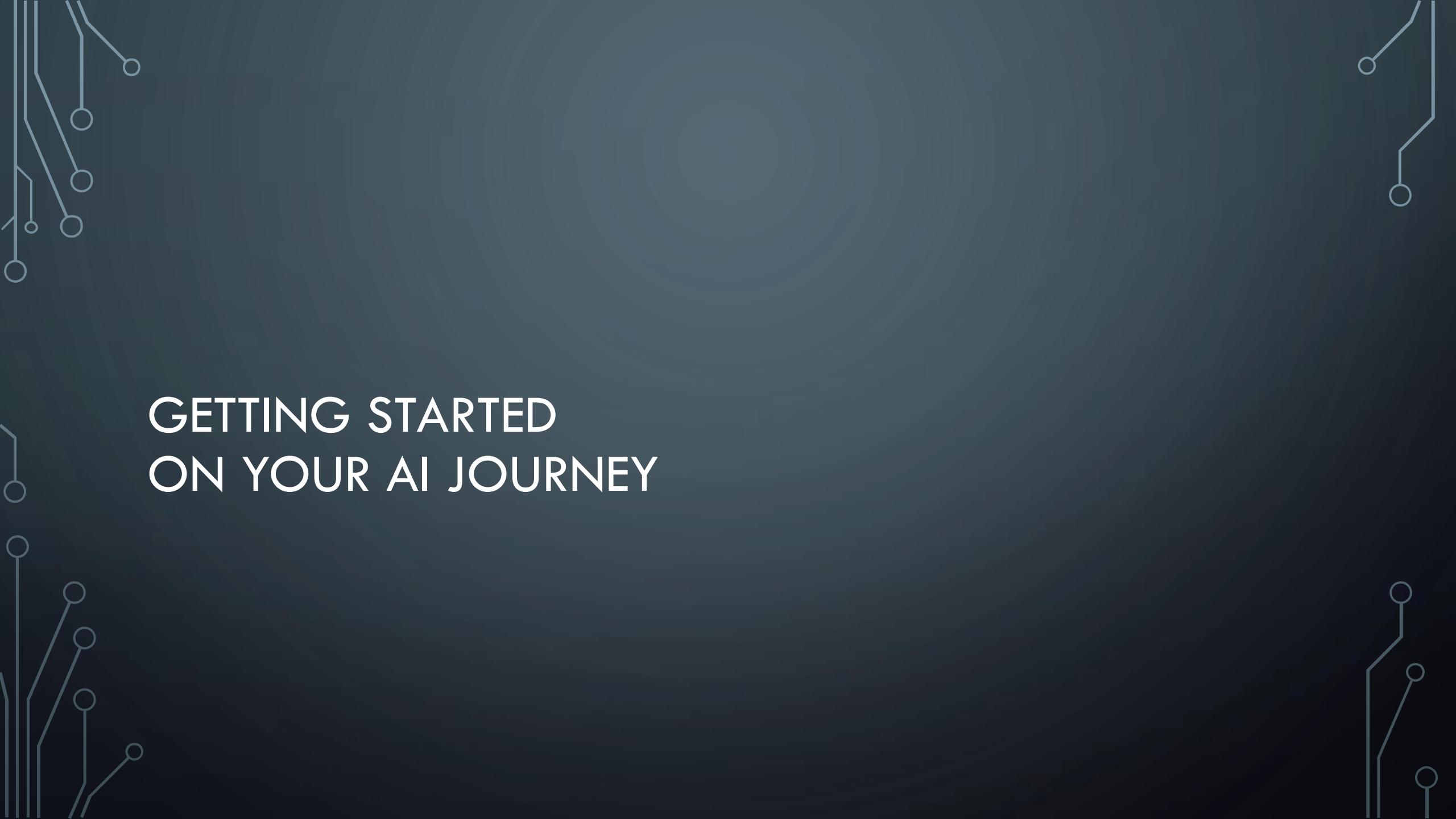
Mar 19, 2023

General | Healthcare

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A Game Changer for Rehabilitation – Physiotherapy has long been a crucial element in rehabilitating patients with musculoskeletal, neurological, and other physical conditions. As technology advances, artificial intelligence (AI) has been making waves across various industries. One area of AI development that has shown promise in physiotherapy is generative AI.



# GETTING STARTED ON YOUR AI JOURNEY

START USING GEN AI IN YOUR DAILY LIFE



ChatGPT

DALL·E 3



SDXL TURBO Beta

Real-Time Text-to-Image Generation

Eleven  
Labs

# FREE / PAID TRAINING



# EMBRACE PYTHON AND ANACONDA



The image shows a dark-themed mockup of the Anaconda website homepage. At the top, there's a navigation bar with the Anaconda logo, 'Enterprise', 'Pricing', 'Resources', and 'About' links, along with 'Free Download' and 'Sign In' buttons. Below the navigation is a large, bold title 'The Operating System for AI'. Underneath the title is a subtitle: 'Easily take your AI projects from concept to deployment with end-to-end tools to streamline development'. At the bottom of the main section are several logos of companies that use Anaconda, including PNC, HSBC, Citi, ExxonMobil, and Goldman Sachs. A green 'Sign Up >' button is positioned above the company logos.

ANACONDA.

Enterprise   Pricing   Resources   About

Free Download   Sign In

# The Operating System for AI

Easily take your AI projects from concept to deployment with end-to-end tools to streamline development

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Contact Sales >

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# CERTIFICATIONS



**The future has not been written.  
There is no fate but what we make for ourselves.  
-Sarah Connor**

