



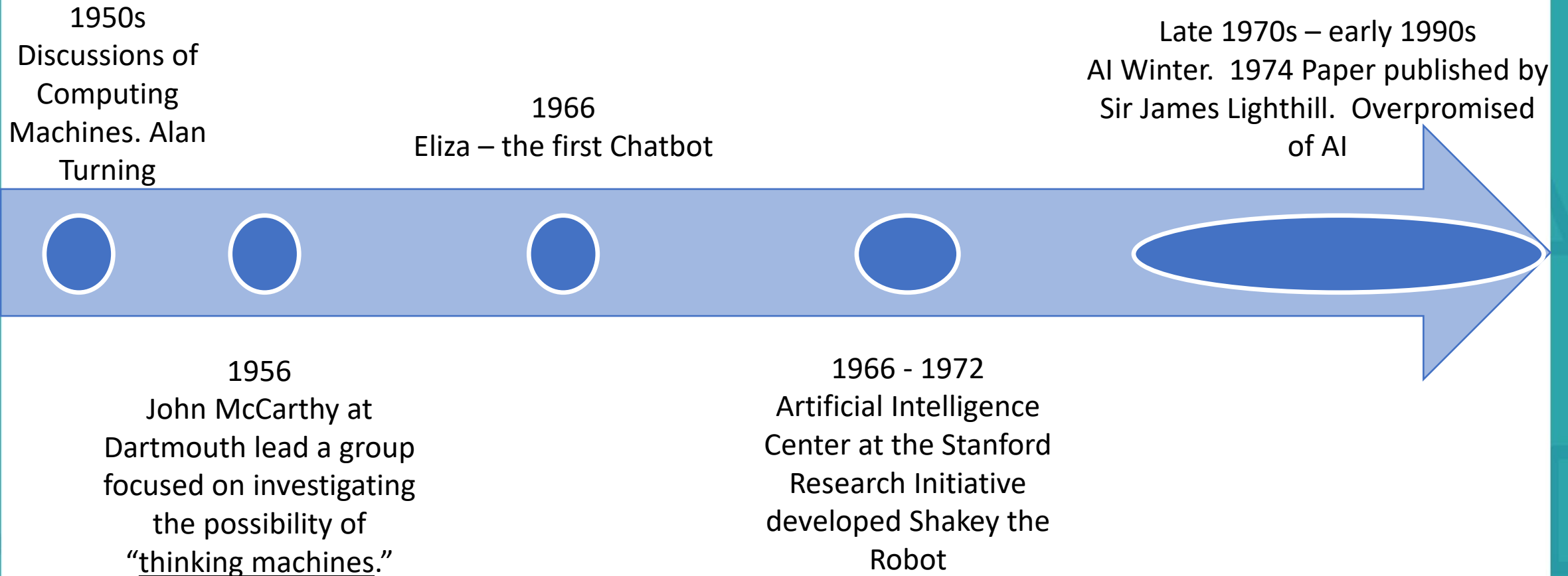
# What AI is...and is Not

Megan Bixler, CPE, RPL

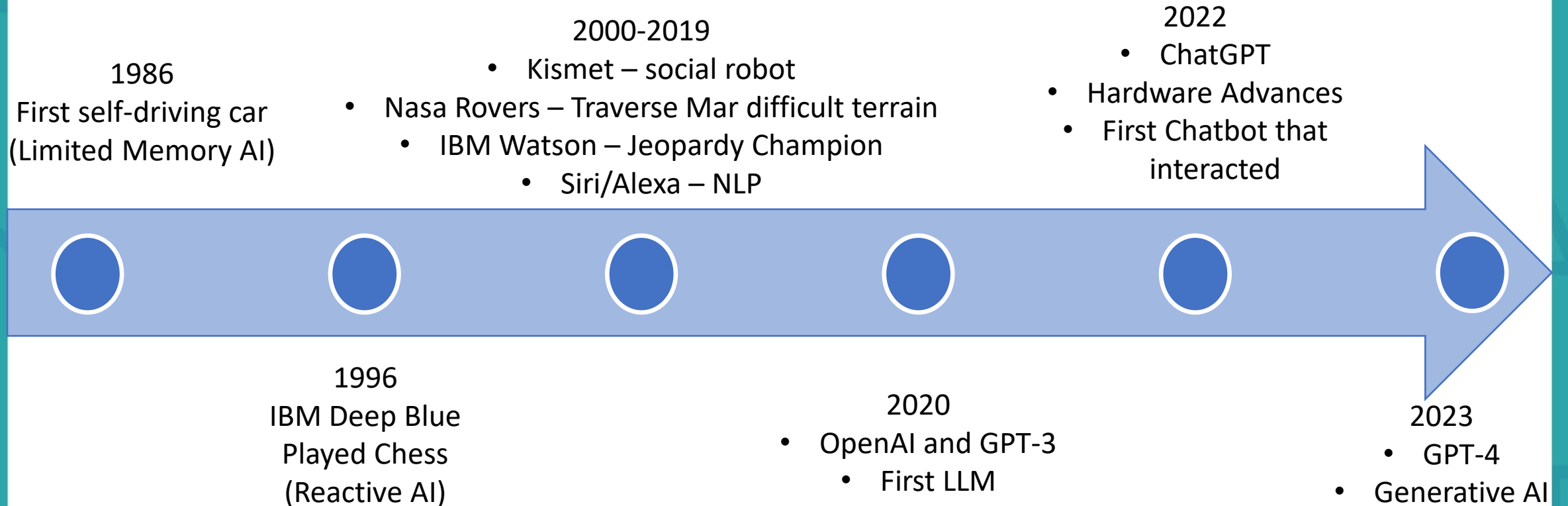
Senior Technology Strategist

APCO International

# History of AI – Before AI Winter



# History of AI – After AI Winter - 2023

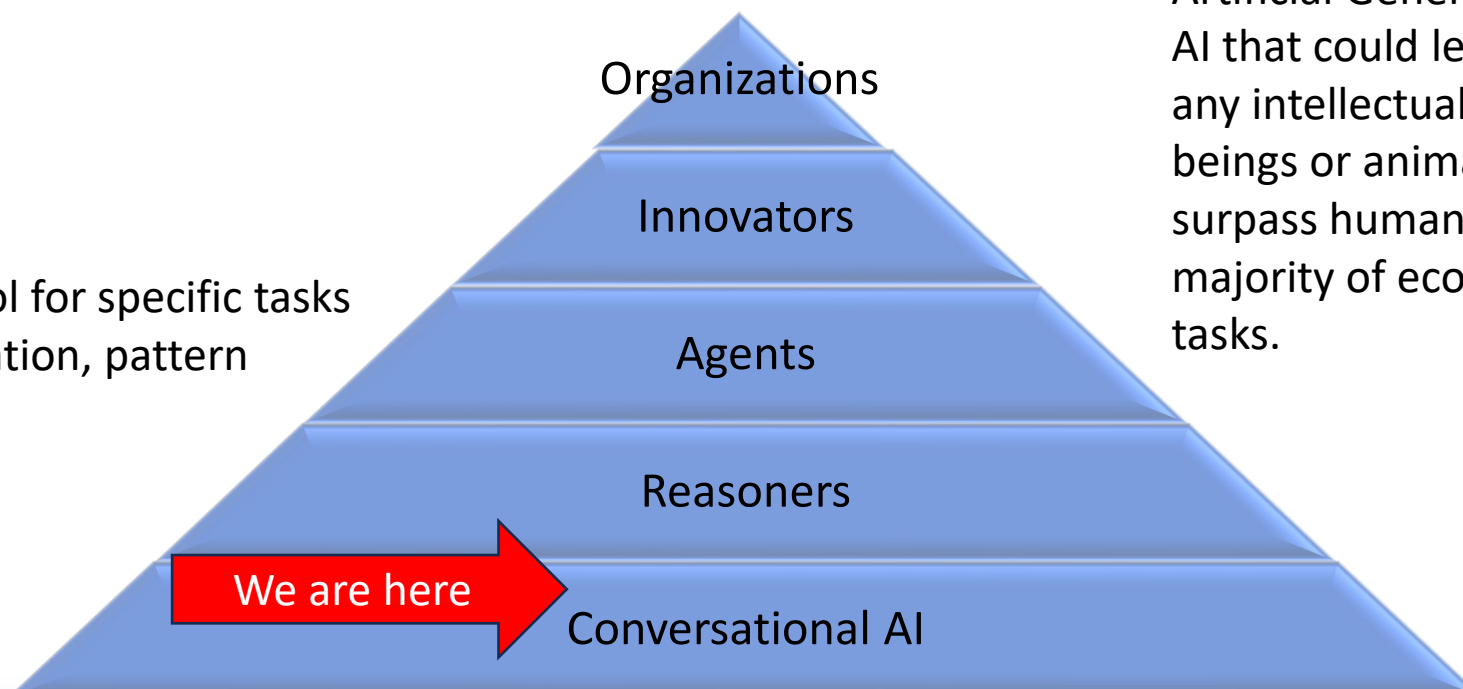


# OpenAI Stages of Evolution

Generative AI and Artificial General Intelligence (AGI) represent two distinct stages in the evolution of artificial intelligence, each with unique capabilities and limitations.

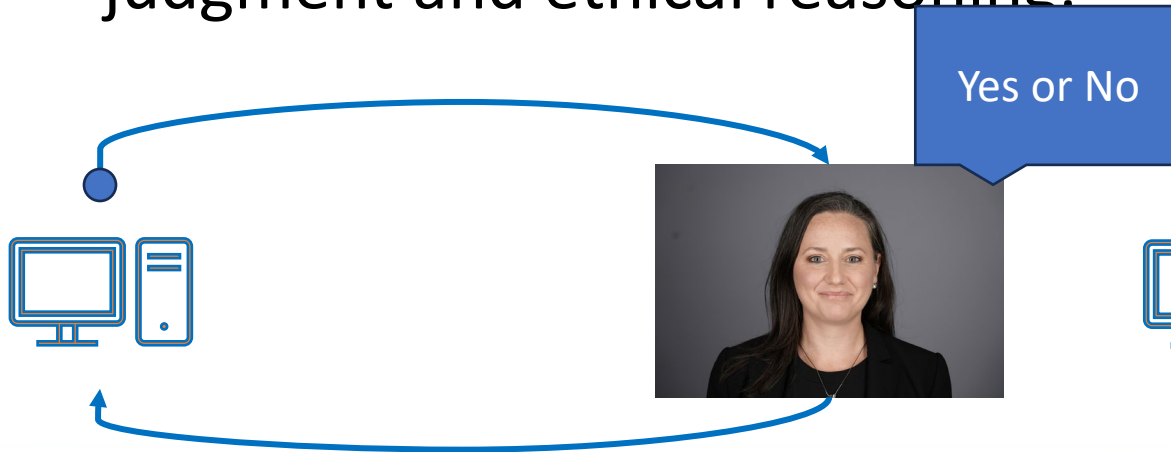
Artificial General Intelligence (AGI):  
AI that could learn to accomplish any intellectual task that human beings or animals can perform, or surpass human capabilities in the majority of economically valuable tasks.

Generative AI: Tool for specific tasks  
(e.g., content creation, pattern recognition, etc.)



# Human In/On The Loop

- Human in the Loop (HITL) is a design principle where humans and AI systems collaborate, combining the speed and scale of automation with human judgment and ethical reasoning.
- Human on the Loop (HOTL) system is a model of human-AI interaction where the AI operates autonomously, but a human monitors the system and can intervene if necessary.



# Agentic AI...According to OpenAI

“AI systems that can pursue complex goals with limited direct supervision.”  
OpenAI 2023

Released August 2025 with GPT-5.

**Autonomy:**  
Operates with minimal human oversight.

**Goal-directed behavior:** Can plan and act toward achieving complex objectives.

**Tool use:** May interact with external systems or APIs to complete tasks.

**Adaptability:**  
Can respond to dynamic environments or changing inputs.

OpenAI also notes that these systems are useful but also introduce more risks.

We are still in the talking phase but starting to teach AI how to think.

# What Is AI?

## Natural Language Processing

- Analyze and Generate Human Language

## Machine Learning Platforms

- Users Build and Deploy AI Models

## Computer Vision Tools

- Analyze and Interpret Visual Data

## Generative AI Tools

- Create New Content Based on Learned Platforms

## Predictive Analytics Tools

- Forecast Outcomes Based on Data.

## Symbolic AI

- Formal Logic to Represent Knowledge and Reason

# AI and Machine Learning

AI as the **umbrella term** that covers all technologies and methods that make machines "smart."

- **Analyze patterns** in massive amounts of text.
- **Predict** what words or phrases are likely to come next.
- **Generate** responses that match the style and structure of human language.

**Machine Learning** is a **subset of AI**. It's a method used to achieve AI by allowing computers to learn from data rather than being explicitly programmed.

- **Feed data** into algorithms.
- The system **learns patterns** from that data.
- It then **makes predictions or decisions** based on new data.

AI is the *goal* – Making Machines Smart

ML is *one of the tools* to reach the AI Goal

# AI Rules of Thumb

- Artificial Intelligence = Learning and Adapting
  - A recommendation engine that learns your preferences over time (like Netflix or Spotify).
  - A self-driving car that adjusts to different road conditions.
  - A chatbot that understands natural language and responds flexibly (like CoPilot!).



# Common AI Misconceptions

AI Understands

AI Can Make a  
Decision Like a  
Human

AI is Always  
Objective

AI Can Do  
Everything

AI Has Emotions of  
Empathy

AI Discovers or  
Question the  
World Like  
Humans Do

# Understand Understanding

| Human Understanding                                | AI “Understanding”                                                              |
|----------------------------------------------------|---------------------------------------------------------------------------------|
| Involves awareness, emotions, context, and intent. | Involves pattern recognition and statistical associations.                      |
| You know <i>why</i> something makes sense.         | AI knows <i>that</i> something often follows something else in data.            |
| You can reflect, reason, and explain meaning.      | AI can generate responses that <i>appear</i> meaningful based on training data. |

# Misconceptions Rules of Thumb

- Automation = Predefined Rules
  - A coffee machine that starts brewing at 7 AM.
  - An email filter that moves messages with the word “invoice” to a folder.
  - A chatbot that follows a decision tree (e.g., “If user says X, reply with Y”).
- These systems are **predictable** and **don’t improve** unless a human updates the rules.





Questions?



# AI Summit

October 7-8, 2025 | Orlando, FL

APCO International Summit Series

