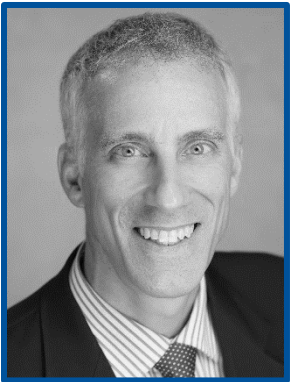


THE HYPE AND THE HOPE

Exploring Artificial Intelligence in EMS

Presenters



Michael Brook

Senior Vice President,
Client Relations

Digitech



Ben Lambert

Chief Information Officer

Digitech



Jacob Saur

ECC Administrator

**Arlington County Public
Safety Communications
and Emergency
Management**



Justin Dillard

Lead Solutions Consultant

First Due



Tim George

EMS Director,
Captain

Smyrna Fire Department

Webinar Goals

- ✓ Discover what AI is – and isn't
- ✓ Understand where we are in the hype cycle of AI and where we are headed in the future
- ✓ Learn from EMS industry leaders and how they think of AI in their areas of expertise

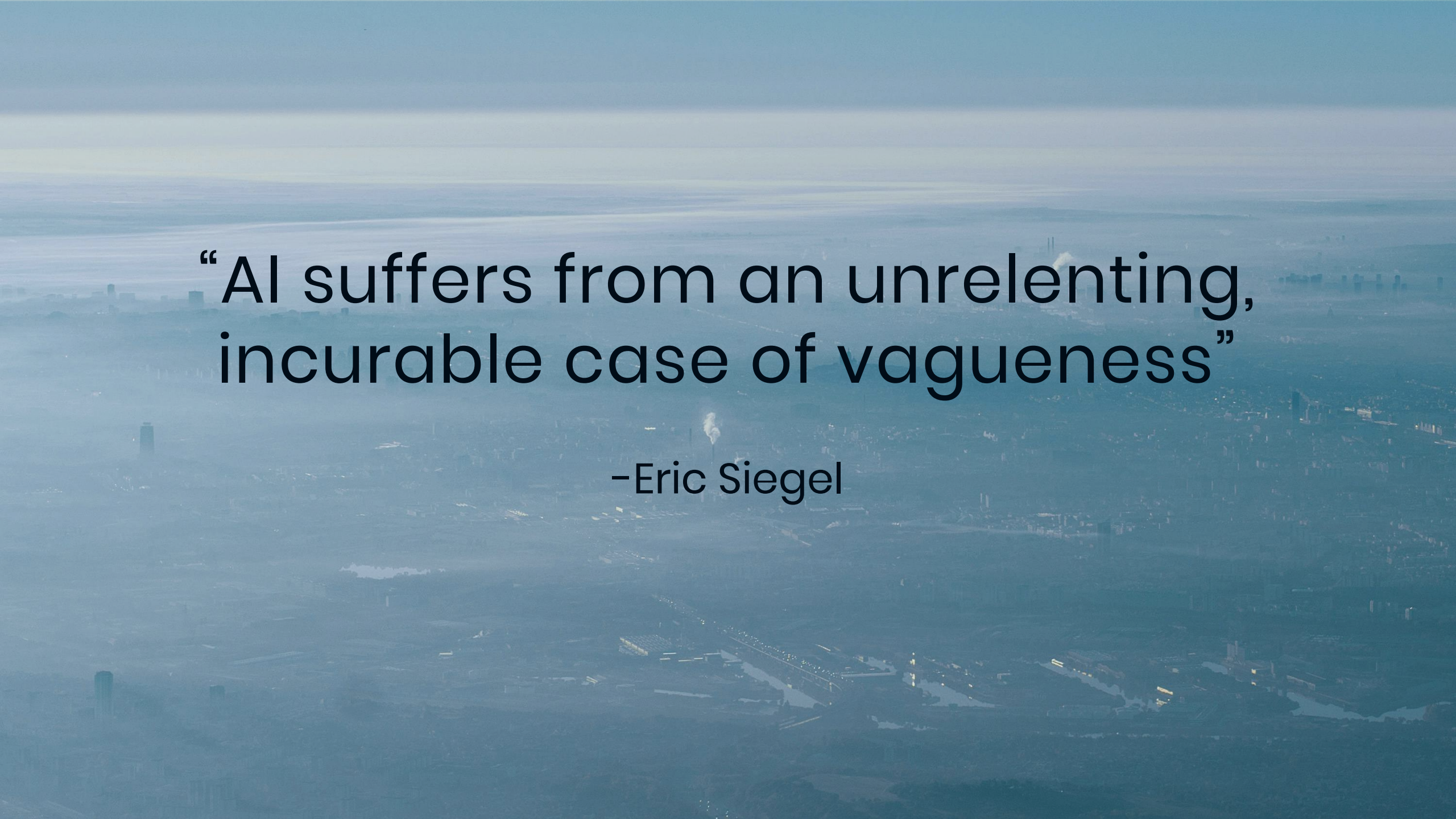
HOW DID YOU GET
BUDGET APPROVAL
FOR ALL THIS?

I JUST
TOLD THEM
THE NAME
OF THE
PROJECT.



TOM
FISH
BURNE

@marketoonist.com



“AI suffers from an unrelenting,
incurable case of vagueness”

–Eric Siegel

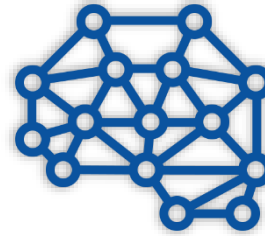
Types of Artificial Intelligence



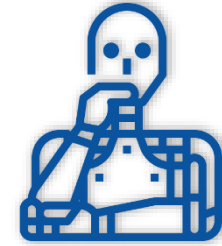
Reactive
Machines



Limited
Memory

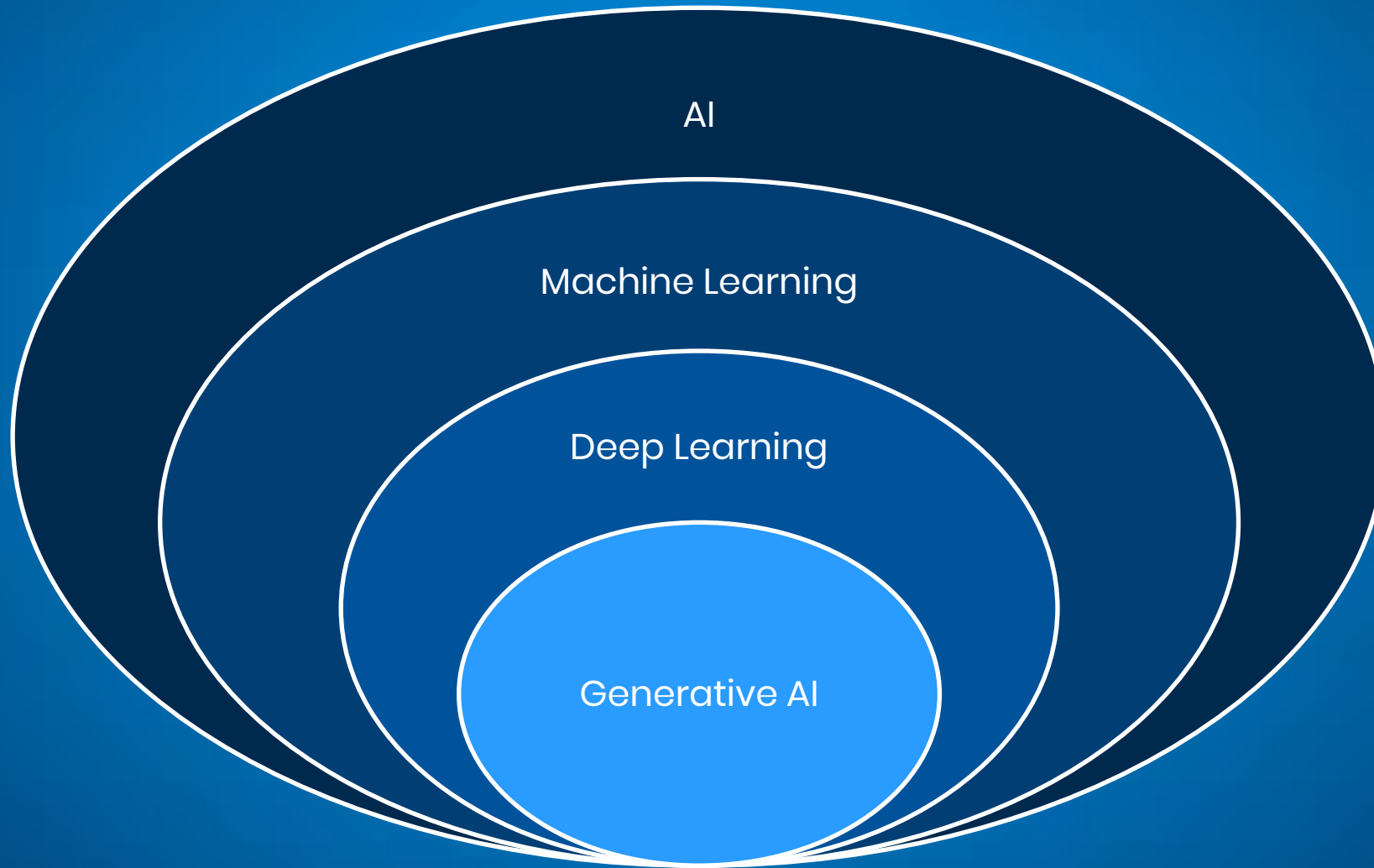


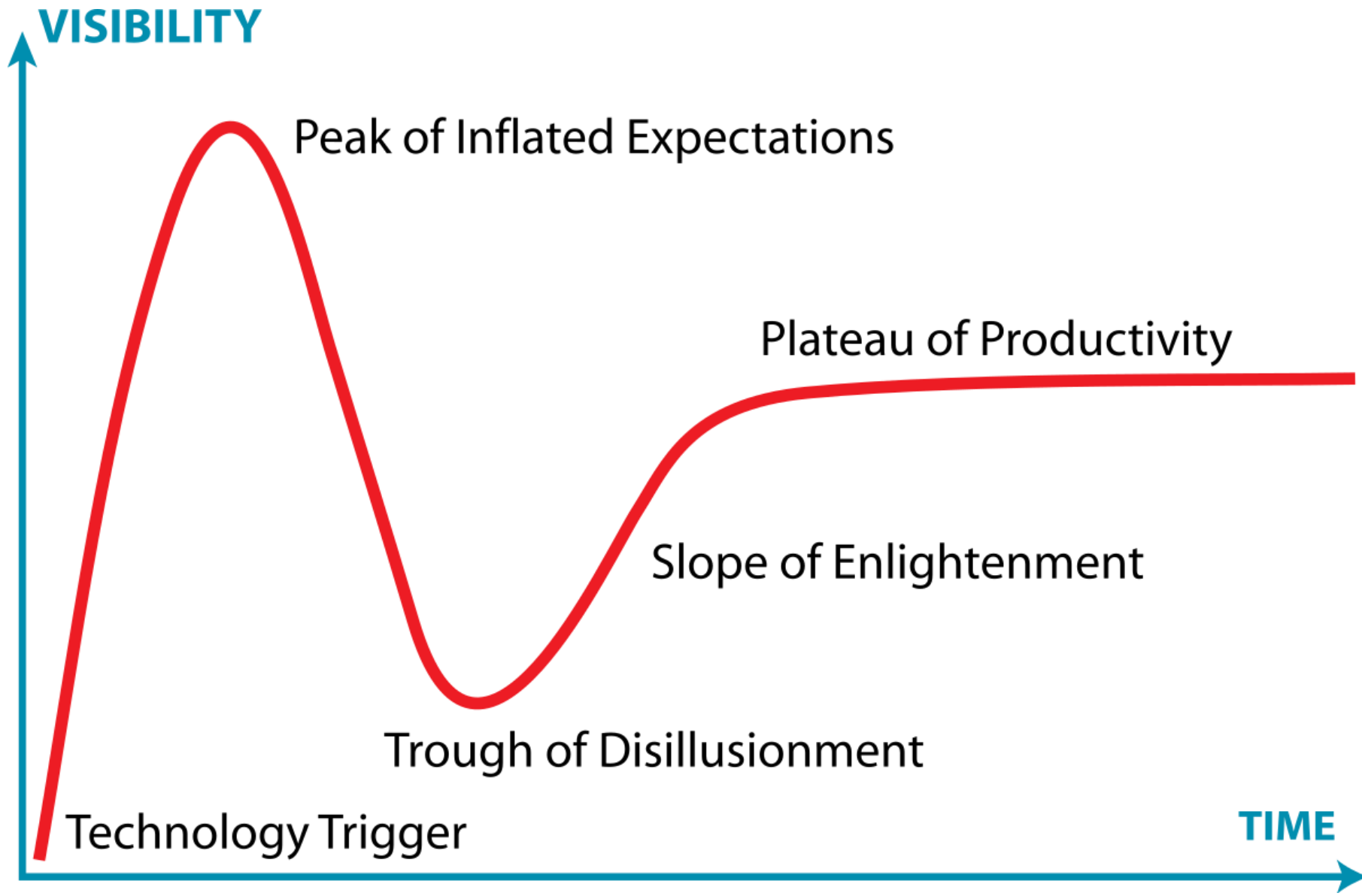
Theory of
Mind



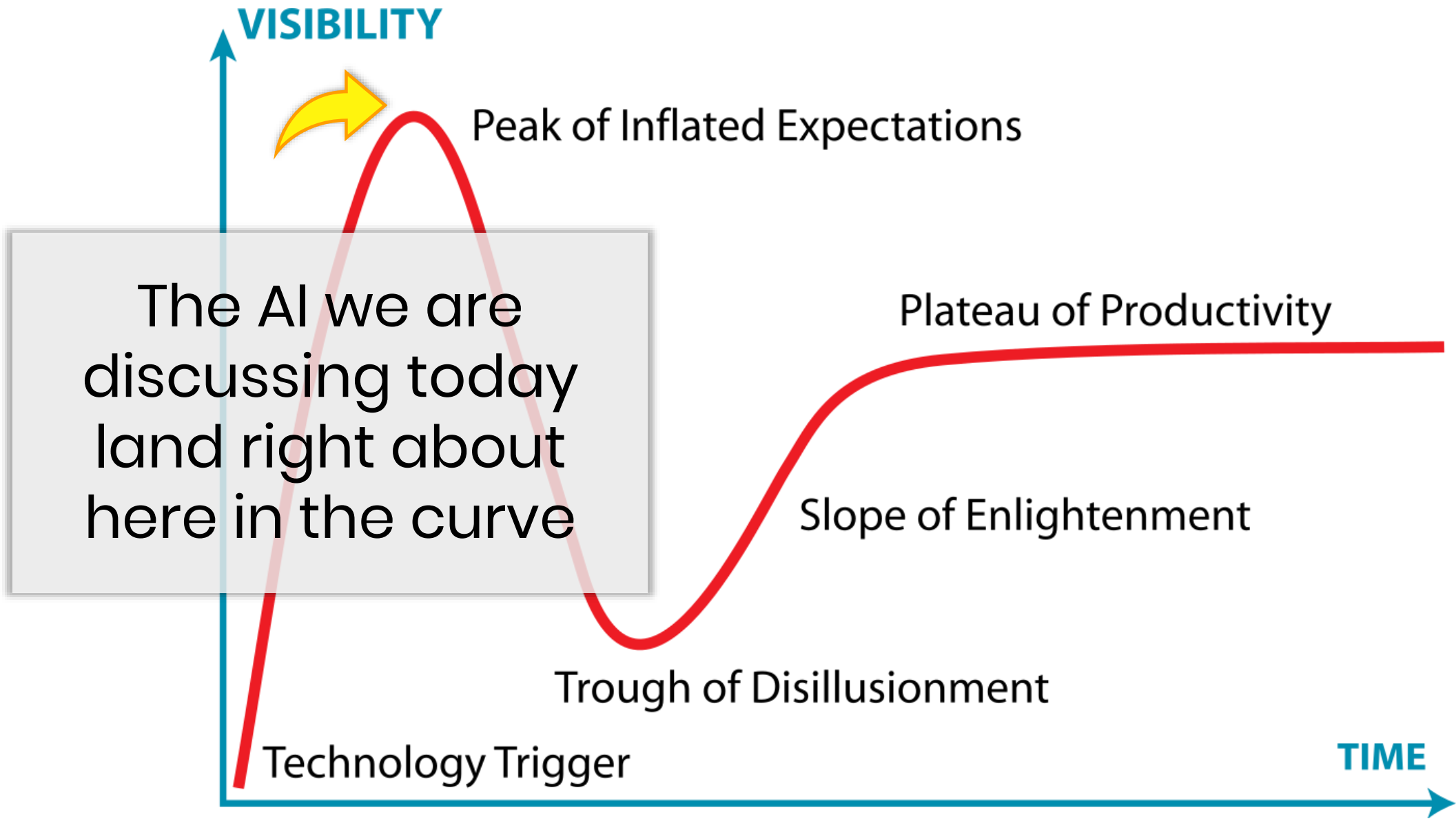
Self-
Awareness

Types of Artificial Intelligence





Source: Gartner Hype Cycle



Source: Gartner Hype Cycle

AI is already part of our lives

Chatbots and Digital Assistants

- Bots that deliver content to customers who have common questions
- Siri, Alexa, Google Assistant

Web Searches

- Google algorithm
- Predictive searches

Self-Driving and Parking

- Autonomous vehicles
- Driver assistance

Email and Text Communication

- Smart replies
- Email filters

Product Recommendations

- Personalized shopping experiences

Maps and Directions

- Calculating routes that incorporate traffic and construction





**Many companies
use the term “AI”
without truly
implementing AI
in their processes**

Recent Predictions and Statistics

AI will create 133 million new jobs by 2030 (*McKinsey*)

Almost 25% of jobs are expected to be “disrupted” by AI over the next 5 years
(*World Economic Forum*)

77% of consumers now use an AI-powered device, but only 33% think that they do
(*Pega*)

65% of companies are using AI internally, while 74% are testing it (*Deloitte*)

68% of business leaders think it's unethical for employees to use AI tools without the permission of a manager (*Tech.co*)

POLL



What does ChatGPT say about AI in EMS?



Prompt:

**How is AI impacting
Emergency Medical Services?**

How is AI impacting Emergency Medical Services?

(according to ChatGPT)

AI is enhancing the efficiency, accuracy, and effectiveness of Emergency Medical Services, ultimately leading to better patient outcomes and saving more lives.

- **Faster Diagnosis and Triage:**

- AI algorithms can analyze medical data such as vital signs, symptoms, and medical history to assist in diagnosing conditions quickly and accurately. This helps EMS personnel prioritize cases based on severity, ensuring that critical cases receive immediate attention.

- **Predictive Analytics:**

- AI can predict potential medical emergencies based on various factors like patient history, environmental conditions, and demographic data. This enables proactive measures to be taken to prevent emergencies or allocate resources more effectively.

- **Remote Monitoring:**

- AI-powered devices can remotely monitor patients' vital signs and alert EMS personnel of any abnormalities or deterioration in real-time. This allows for early intervention and reduces the need for frequent hospital visits.

- **Automated Documentation:**

- AI can automate the documentation process by transcribing voice recordings or extracting relevant information from medical records. This reduces paperwork for EMS providers and ensures accurate record-keeping.

- **Optimized Resource Allocation:**

- AI algorithms can analyze historical data to predict demand for EMS services in different areas at various times. This helps in optimizing resource allocation by positioning ambulances strategically and minimizing response times.

- **Telemedicine:**

- AI enables telemedicine platforms that connect EMS providers with remote medical specialists for consultation and guidance in complex cases. This improves patient outcomes, especially in areas with limited access to specialized medical care.

- **Training and Simulation:**

- AI-powered simulations and virtual reality training programs provide EMS personnel with realistic scenarios to practice their skills and decision-making abilities in a risk-free environment.



DISPATCH & COMMUNICATIONS

AI in Dispatch and Emergency Communications



ARLINGTON
VIRGINIA

Public Safety Communications
and Emergency Management

Jacob A. Saur, ENP, CPE

ECC Administrator

**Arlington County Public Safety Communications
and Emergency Management**

OPERATIONAL SOFTWARE



AI in EMS Operational Software



first due

Justin Dillard

Lead Solutions Consultant

First Due

A person's hands are shown using a laptop. The laptop screen displays a financial dashboard with a table of data, a pie chart, and a line graph. The person is wearing a light blue shirt and a dark blue watch. The background is a blurred office setting with a window showing a city skyline.

REVENUE CYCLE MANAGEMENT

AI in Revenue Cycle Management



Expert EMS billing and technology

Ben Lambert

Chief Information Officer

Digitech

General Areas of Focus



Improve reactive AI modules already in place



Leverage Microsoft OpenAI to analyze org. data on a broader scale



Develop end-user Copilots (assistants) by job function

Anticipated Outcomes

Added value for
clients

Faster error
detection

New / improved KPIs

Training
reinforcement, fewer
errors

EDUCATION & IN THE FIELD



AI in EMS Education and in the Field



Tim George

EMS Director, Captain

Smyrna Fire Department, Georgia



AI in EMS Education

The challenge:
Training medics for **low frequency**
but **high acuity** calls

What about empathy?

AI in the Field

- **Telemedicine options**
- **Documentation improvements**



QUESTIONS



Thank you for attending



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Appendix

Types of AI

1. Reactive machines

Reactive machines are the most basic type of artificial intelligence. Machines built in this way don't possess any knowledge of previous events but instead only "react" to what is before them in a given moment. As a result, they can only perform certain advanced tasks within a very narrow scope, such as playing chess, and are incapable of performing tasks outside of their limited context.

2. Limited memory machines

Machines with limited memory possess a limited understanding of past events. They can interact more with the world around them than reactive machines can. For example, self-driving cars use a form of limited memory to make turns, observe approaching vehicles, and adjust their speed. However, machines with only limited memory cannot form a complete understanding of the world because their recall of past events is limited and only used in a narrow band of time.

3. Theory of mind machines

Machines that possess a "theory of mind" represent an early form of artificial general intelligence. In addition to being able to create representations of the world, machines of this type would also have an understanding of other entities that exist within the world. As of this moment, this reality has still not materialized.

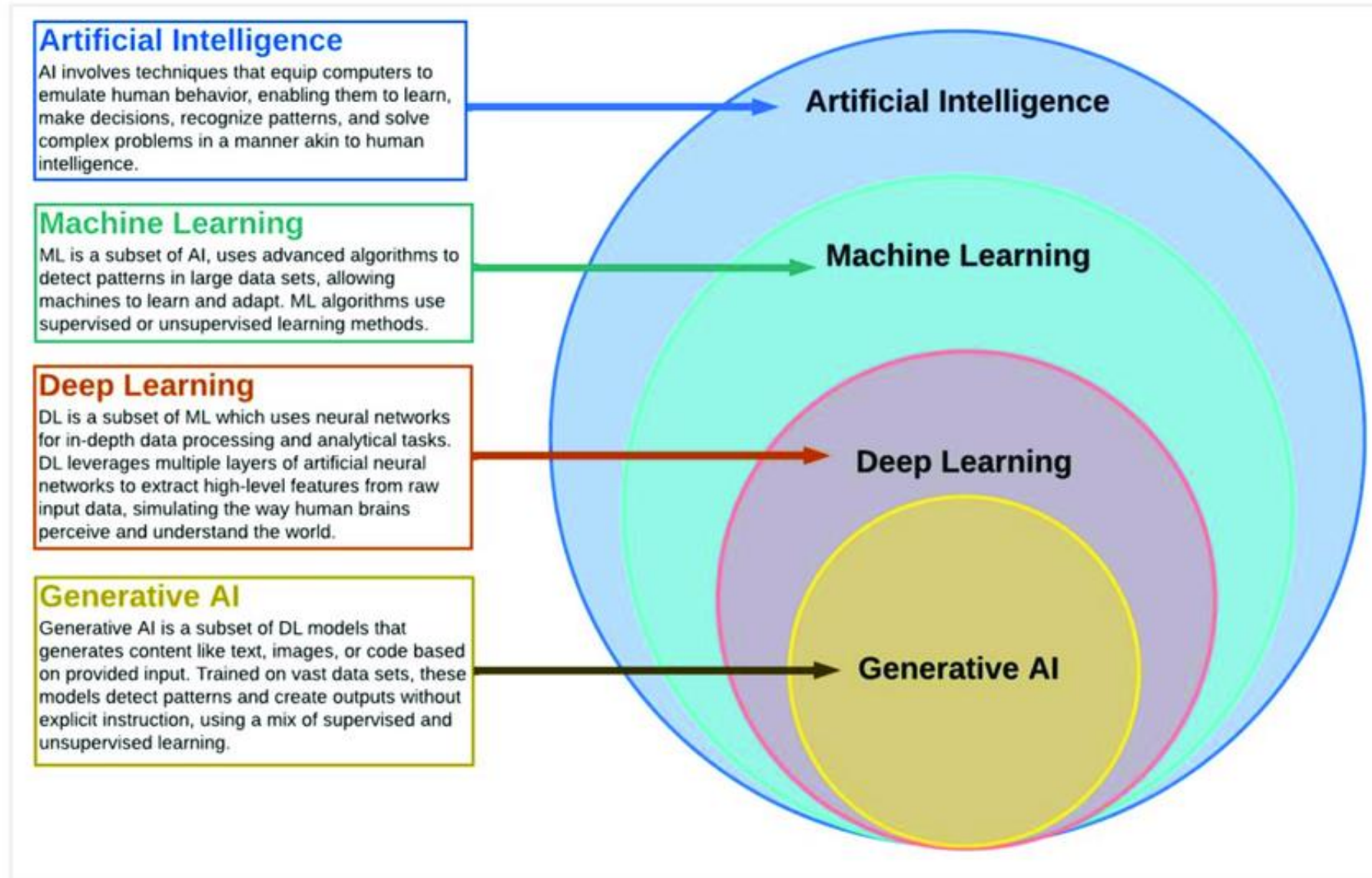
4. Self-aware machines

Machines with self-awareness are the theoretically most advanced type of AI and would possess an understanding of the world, others, and itself. This is what most people mean when they talk about achieving AGI. Currently, this is a far-off reality.

Source: [What Is Artificial Intelligence? - Coursera](#)

Types of AI

Source: [ResearchGate](#)



Hype Cycle for Artificial Intelligence, 2023



Source:
[What's New in Artificial Intelligence from the 2023 Gartner Hype Cycle](#)

gartner.com

Source: Gartner
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FITCH
 A ASSOCIATES

PINNACLE
 A ASSOCIATES