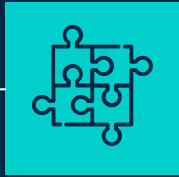




BASICS OF ARTIFICIAL INTELLIGENCE

July 31, 2023
South Huntington
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WHAT WE'LL COVER



01

WHAT IS ARTIFICIAL
INTELLIGENCE?



02

TYPES OF AI



03

USES AND
CONSIDERATIONS

WHAT IS ARTIFICIAL INTELLIGENCE?

Artificial intelligence leverages computers and machines to **mimic** the problem-solving and decision-making capabilities of the human mind. (IBM)



BRIEF HISTORY OF AI

Alan Turing's machine
decodes Enigma

BOMBE



1940

1964



ELIZA

First chatbot invented
by Joseph Weizenbaum

Machine defeats Garry
Kasparov at chess

DEEPBLUE



1997

2020



GPT-3

Natural conversation
tool using machine
learning

CATEGORIES OF AI

ARTIFICIAL NARROW INTELLIGENCE

AI trained to perform a **specific task** that lack the ability to exhibit human-like intelligence or adapt to new situations outside their predefined scope.

Examples:

- ChatGPT
- Stable Diffusion, Midjourney, DALL-E
- Google Assistant, Alexa, Siri
- Self-driving cars
- Customer service chatbots

ARTIFICIAL GENERAL INTELLIGENCE

Theoretical form of AI where a machine would have an intelligence equaled to humans; self-aware and conscious.

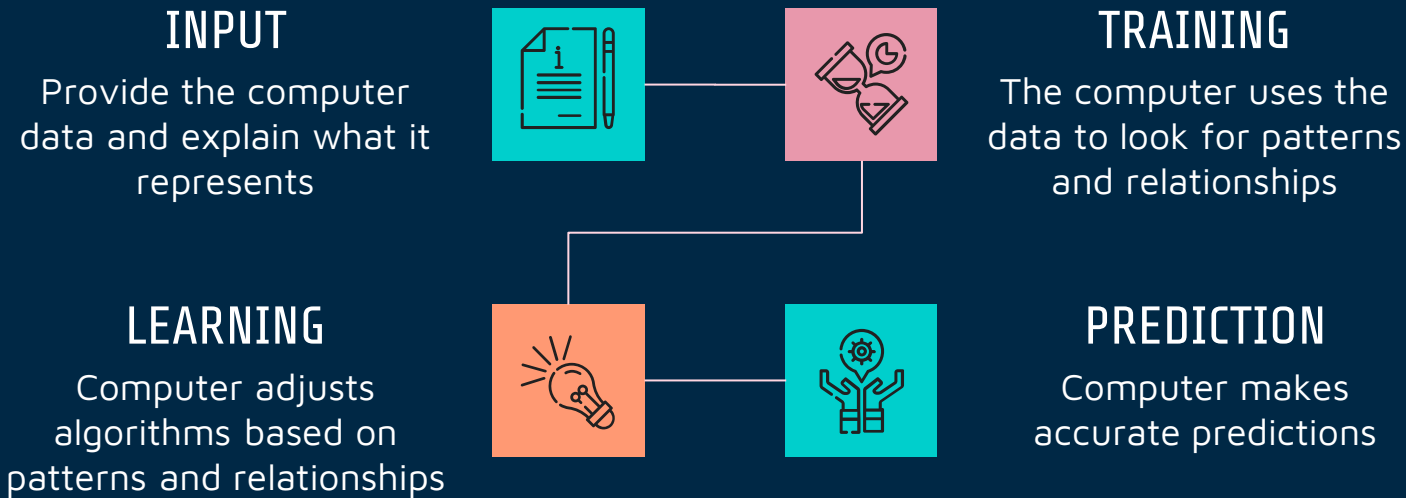
Examples:

- Hal 9000 (2001: A Space Odyssey)
- Skynet (Terminator)
- Data (Star Trek)

Possible but unlikely to occur in our lifetime.

HOW DOES AI WORK?

AI tools and models are trained using **machine learning**, a way for computers to learn to make predictions or decisions without being explicitly programmed to do so.



WHAT IS GENERATIVE AI?

Generative AI can create new and “original” content, such as images, music, or text, based on **patterns** and examples it has been trained on. Two popular examples are below:

CHATGPT

Large Language Model (LLM) trained on a huge amount of text data that can generate human-like text and responses to questions.

Useful productivity tool that can act as a personal assistant or copywriter.

STABLE DIFFUSION

Open source text-to-image application. Generates a new image based on a prompt. Can mimic the artistic styles of artists and designers.

Other popular text-to-image services are Midjourney and DALL-E.

AI ISSUES & CONSIDERATIONS

PRIVACY

“Black Box Problem”

- Lack of transparency
- Lack of accountability

Data usage & collection

BIAS

AI models are only as accurate as their data sources

- “Garbage in, garbage out”

Human error

SAFETY & SECURITY

Hacking and cybersecurity

Intentional bias

Inaccurate information

Over-reliance on AI systems

ETHICS

Copyright

- Creator permission
- Human authorship

Image alteration

Deepfakes



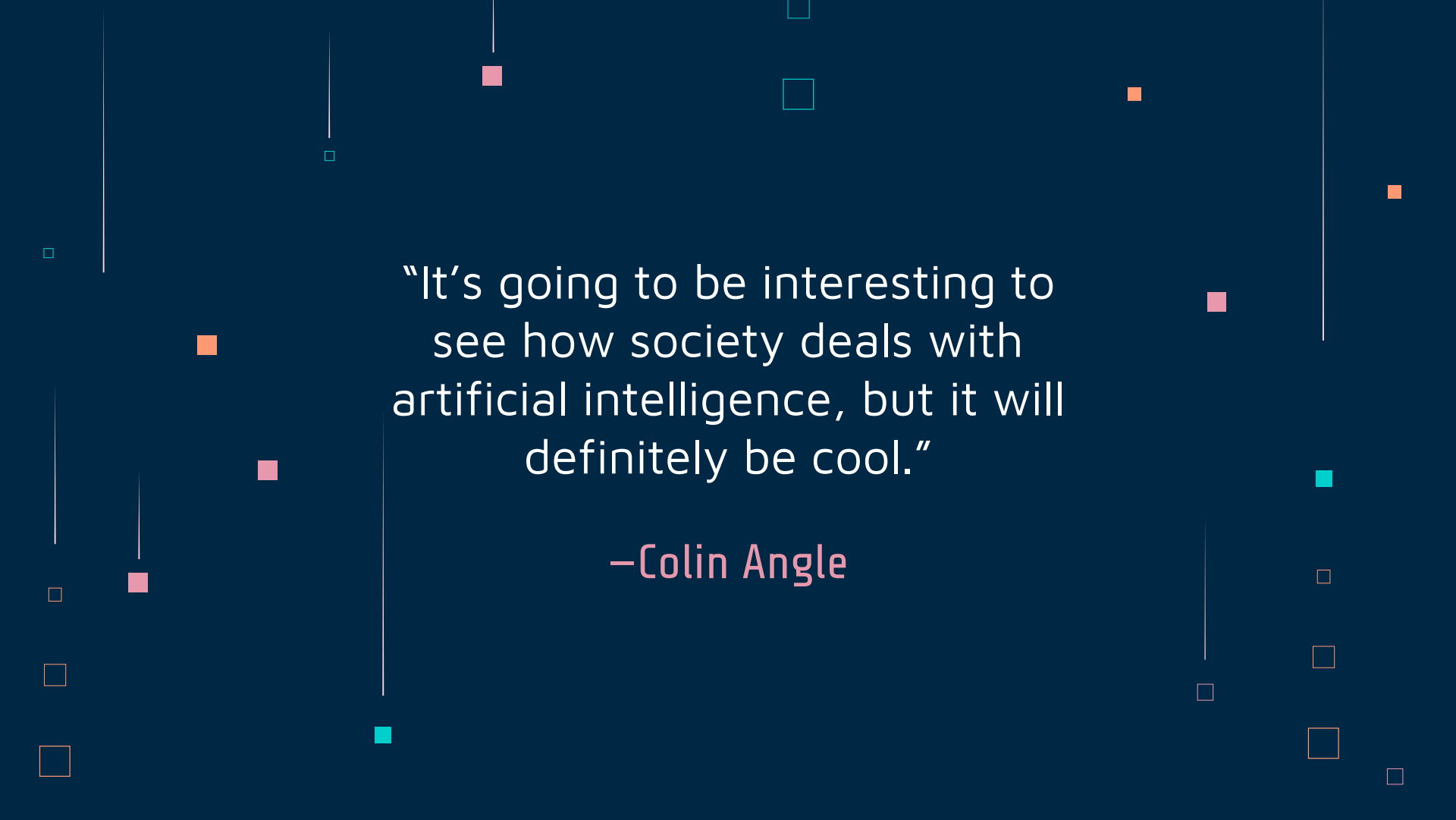
THE FUTURE OF AI

Artificial intelligence continues to mature as a technology and has the potential to impact various aspects of our lives.

WHAT TO EXPECT?

- Smarter everyday technology
- Better deepfakes and more misinformation
- Personalized experiences
- Autonomous transportation
- Job transformations
- Quicker decision-making
- Government regulation



The background is a dark blue gradient. It features several vertical white lines of varying lengths. Scattered throughout are small squares in various colors: light blue, orange, pink, and teal. Some squares are solid, while others are hollow outlines. The overall aesthetic is modern and minimalist.

“It’s going to be interesting to see how society deals with artificial intelligence, but it will definitely be cool.”

—Colin Angle

QUESTIONS?

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