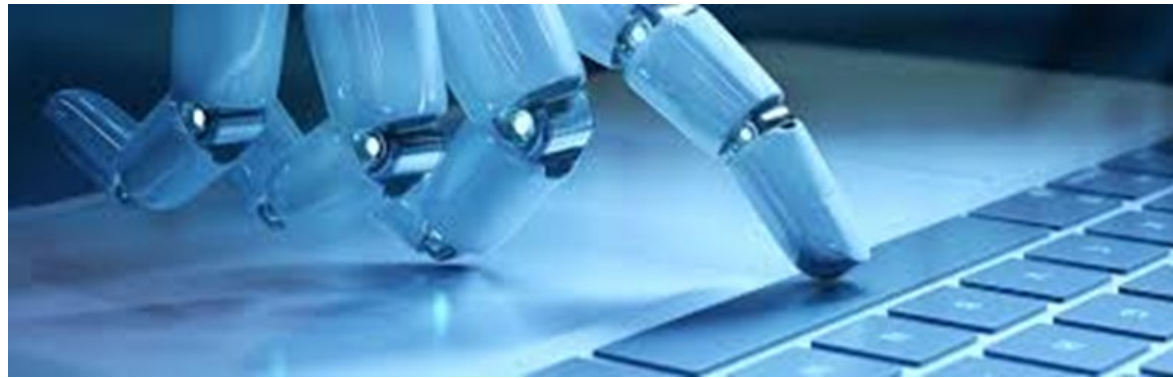


Automation and Artificial Intelligence



Presented By
John H. Higgins, CPA.CITP
Rochester, Michigan



Learning Goals

- Understand the origins of generative AI
- Learn how to use the power of generative AI
- Recognize practical generative AI applications for CPAs

John H. Higgins, CPA.CITP

Strategic Technology Advisor



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Nationally recognized thought leader, advisor, author and speaker on CPA technology

Strategic technology advisor to the profession w/ 35+ years of experience

Founded and sold two CPA technology advisory startups

Former National Mid-market Technology Partner - BDO

CPA Practice advisor Top 25 Thought Leader for the CPA profession

AICPA Business & Industry Hall of Fame Inductee

Past Chair of the Michigan Association of CPAs

Passionate advocate for the CPA profession!

Presentation Outline

- Overview of Artificial Intelligence Today
- History of ChatGPT
- Orientation to the ChatGPT App
- Let's Chat – Practical Applications for CPAs
- A Word of Caution
- Wrap-Up
- Fundamentals of Generative AI Technology

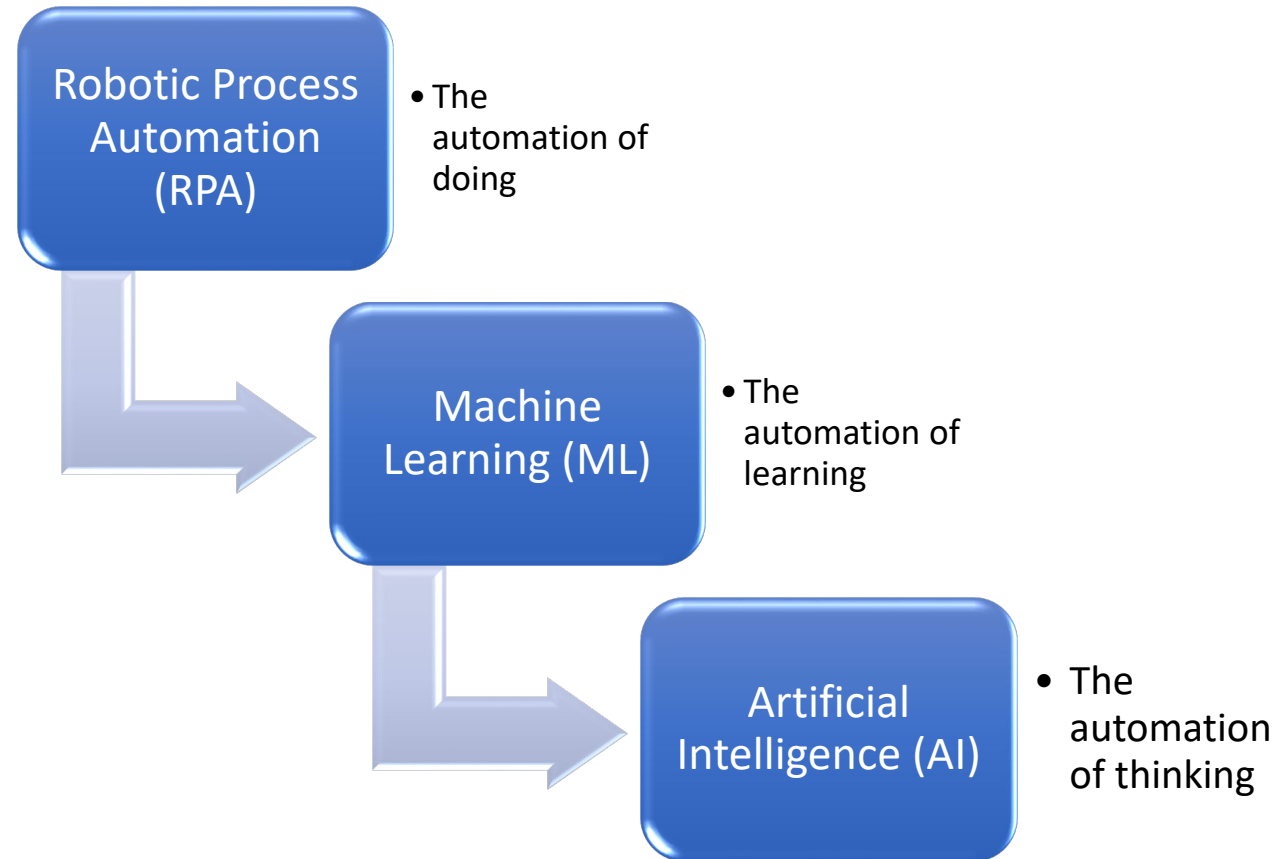
OVERVIEW OF ARTIFICIAL INTELLIGENCE IN BUSINESS TODAY



“Artificial intelligence is like electricity; it has application everywhere”

Andrew Ng
Co-founder Google Brain

Key Trends in Automation



Key Trends in AI Technology

- Rapid and widespread adoption
- Mega amounts of capital flowing into this space
- Ethical concerns – biases and usage
- Workforce impact
- Regulatory issues

HISTORY OF CHATGPT



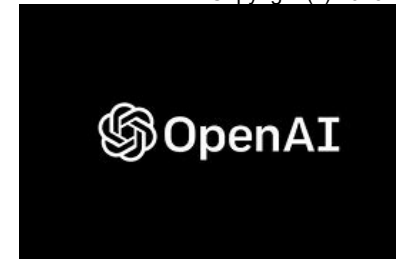
Chatbots

- A program designed to simulate conversation with human users.
- Answers questions, provides information
- Can be text, audio or video based
- Examples:
 - Siri / [Alexa](#) / Cortana
 - ChatGPT
 - [Amelia demo](#)

What is ChatGPT?

- ChatGPT (Generative Pre-trained Transformer)
- Fastest growing app in history
 - Launched November 30, 2022
 - 100 million users within two months
- An AI chatbot
- Developed by OpenAI

History of OpenAI

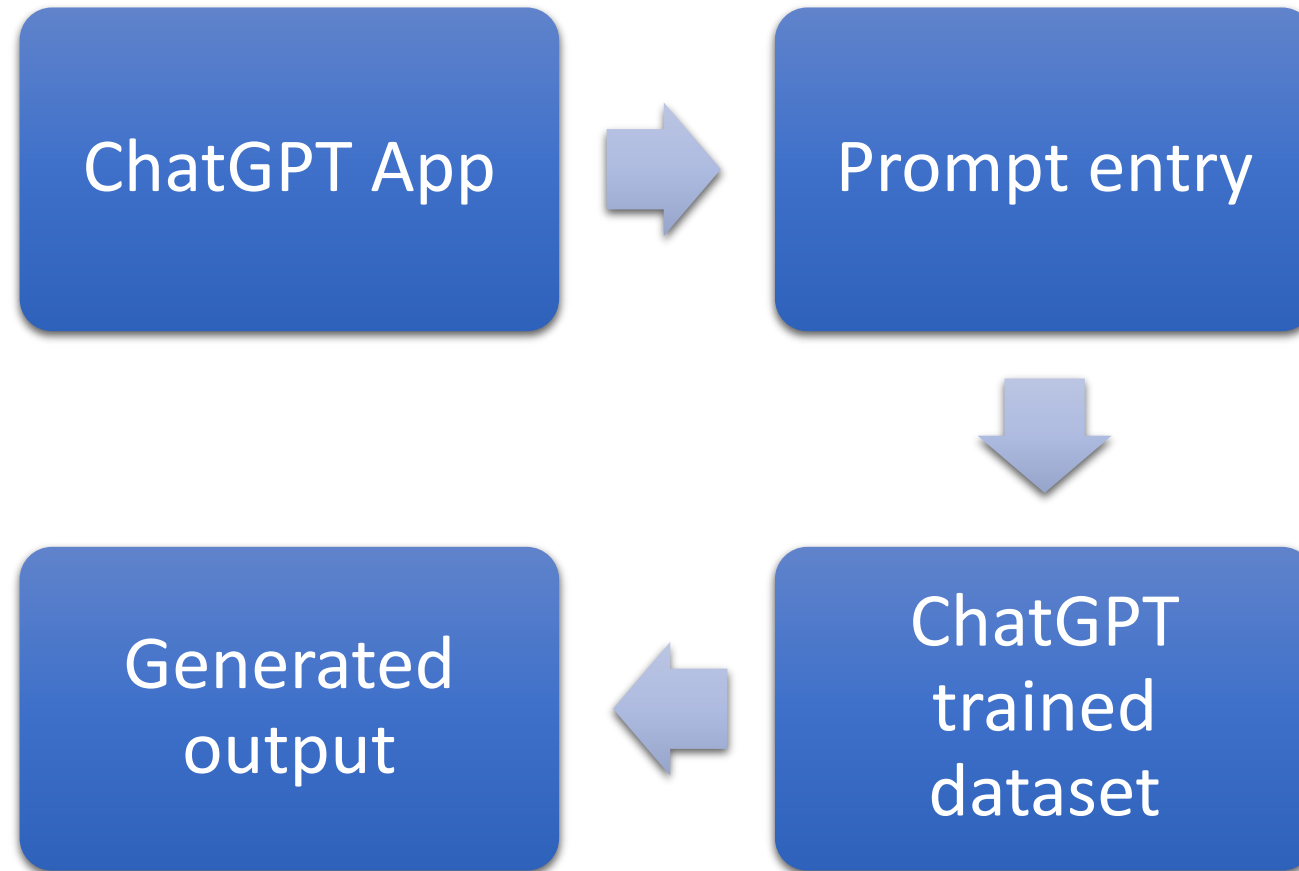


- Research organization founded in 2015 by Elon Musk, Sam Altman and others
- Sam Altman fired by the Board of Directors on 11/17/23 and rehired on 11/22/23
- Elon Musk resigned in 2018 due to a conflict of interest with Tesla & SpaceX
- Microsoft announces \$10 billion investment in Jan 2023 (49% ownership)

ORIENTATION TO THE CHATGPT APP



ChatGPT Model



Chat History

+ New chat

Today

CPA Digital Skills Bundl

AI in Business Today

Previous 30 Days

Bitcoin ETF Explanation

Tech Courses for CPAs

June

Computools, Inc. - Troy

Slide Creation: Best Practices

POS Features for Family-Owned

May

Creating HOA Bylaws

March

ChatGPT: AI Language Model

January

Domain Name Considerations

J John Higgins

Account Information

GPT-4

Prompt

J Write an engaging introduction to a business plan to offer a curriculum of webinars and on demand educational courses for CPA and CFO professional based on personal productivity digital tools such as Microsoft 365, Password management, e-signature, generative AI, Adobe Acrobat and more. These will be sold as an "all you can take" bundle for a flat fee.

 Business Plan Introduction

Generated text output

Elevating the Game: Unleashing Professional Potential through Digital Mastery

Imagine a world where Certified Public Accountants (CPAs) and Chief Financial Officers (CFOs) are not just guardians of financial health, but also trailblazers in the digital revolution. A world where the phrase 'time-consuming' is obsolete, as CPAs and CFOs exploit the untapped potential of digital tools to accomplish in seconds what once took hours. This is not a futuristic vision, but a contemporary reality we are on the brink of realizing. Welcome to **[Your Business Name]**, your gateway to navigating the digital age with finesse and flair.

Our ethos is simple yet revolutionary: **The modern finance professional is only as effective as the digital tools they wield.**

Regenerate

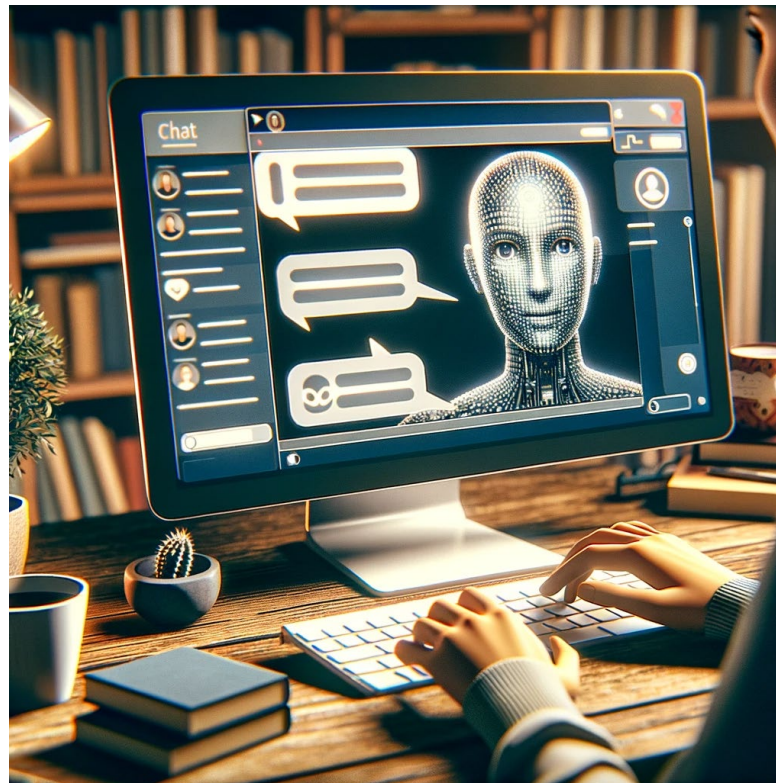
In a landscape where regulatory standards are tightening and financial intricacies are

Send a message

Prompt entry

ChatGPT may produce inaccurate information about people, places, or facts. [ChatGPT August 3 Version](#)

LET'S CHAT



Practical ChatGPT applications for CPAs

- Communicating financial information
- Financial data analysis
- Accounting research
- Practice management support

ChatGPT Prompt Example

Explain FASB 13 lease accounting standard in a bulleted list at the college freshman level



View results in ChatGPT

ChatGPT Prompt Example

Explain the differences between an LLP, LLC and C corporation form of entity in a bulleted list, with pros and cons of each, for a small business entrepreneur



View results in ChatGPT

ChatGPT Prompt Example

Create an Excel formula to calculate the monthly payment on a 30-year mortgage for \$400,000 at a 7% interest rate

Generate a payment amortization schedule in tabular format



View results in ChatGPT

ChatGPT Prompt Example

Create an excel macro to print the amortization schedule through the requested payment date



View results in ChatGPT

ChatGPT Prompt Example

Analyze Microsoft financial statements and
calculate financial ratios



View results in ChatGPT

ChatGPT Prompt Example

Image uploaded
to ChatGPT for
analysis

What is this form?

Agencia Tributaria
Teléfono: 901 33 55 33
www.agenciatributaria.es

Impuesto sobre la Renta de las Personas Físicas
Declaración Ejercicio 2013

Página 1
Modelo **D-100**

Primer declarante y cónyuge, en caso de matrimonio no separado legalmente

Primer declarante

01 NIF 02 Primer apellido 03 Segundo apellido 04 Nombre

Sexo del primer declarante: H: hombre 05 M: mujer 06 Estado civil (el 31-12-2013): Soltero/a 07 Casado/a 08 Viudo/a 09 Divorciado/a o separado/a legalmente

Fecha de nacimiento 10

Grado de discapacidad. Clave (véase la Guía) 11

Cambio de domicilio. Si ha cambiado de domicilio, consigne una "X" 12

Domicilio habitual actual del primer declarante

15 Tipo de vía 16 Nombre de la vía Pública

17 Tipo de numeración 18 Número de casa 19 Calificador del número 20 Bloque 21 Portal 22 Escalera 23 Planta 24 Puerta

25 Datos complementarios del domicilio 26 Localidad / Población (si es distinta del municipio)

27 Código Postal 28 Nombre del Municipio

29 Provincia 30 Telef. fijo 31 Telef. móvil 32 N.º de FAX

Si el domicilio está situado en el extranjero:

33 Domicilio / Address 34 Población/Ciudad

35 Datos complementarios del domicilio 36 Código Postal (ZP) 37 Provincia/Región/Estado

38 País 39 Código País 40 Telef. fijo 41 Telef. móvil 42 N.º de FAX

Datos adicionales de la vivienda en la que el primer declarante tiene su domicilio habitual actual. Si el primer declarante y/o su cónyuge son propietarios de la vivienda, se consignarán también, en su caso, los datos de las plazas de garaje, con un máximo de dos, y de los trasteros y anexos adquiridos conjuntamente con la misma, siempre que se trate de fincas registrales independientes.

Titularidad (clave)	Porcentaje/s de participación, en caso de propiedad o usufructo:	Situación (clave)	Referencia catastral
50	Primer declarante: 51	Cónyuge: 52	53
50	Primer declarante: 51	Cónyuge: 52	53
50	Primer declarante: 51	Cónyuge: 52	53
50	Primer declarante: 51	Cónyuge: 52	53
50	Primer declarante: 51	Cónyuge: 52	53
50	Primer declarante: 51	Cónyuge: 52	53

Sólo si ha consignado la clave 3 en la casilla 50: NIF arrendador 55

Si no tiene NIF, consigne Número de Identificación en el País de residencia 56

Cónyuge (los datos identificativos del cónyuge son obligatorios en caso de matrimonio no separado legalmente)

61 NIF 62 Primer apellido

Sexo del cónyuge (H: hombre; M: mujer) 63

Fecha de nacimiento del cónyuge 64

ChatGPT Prompt Example

Create an image of two people discussing business at a conference table. One is a professionally dressed female providing advice to a casually dressed male rock musician



OpenAI Chat ChatGPT Products / Plans

- GPT-3.5
 - Free
 - Web and mobile
- ChatGPT-4.5
 - \$20 per user / per month
 - Create images
 - Chat with voice
 - Analyze data
- API (Application Program Interface)

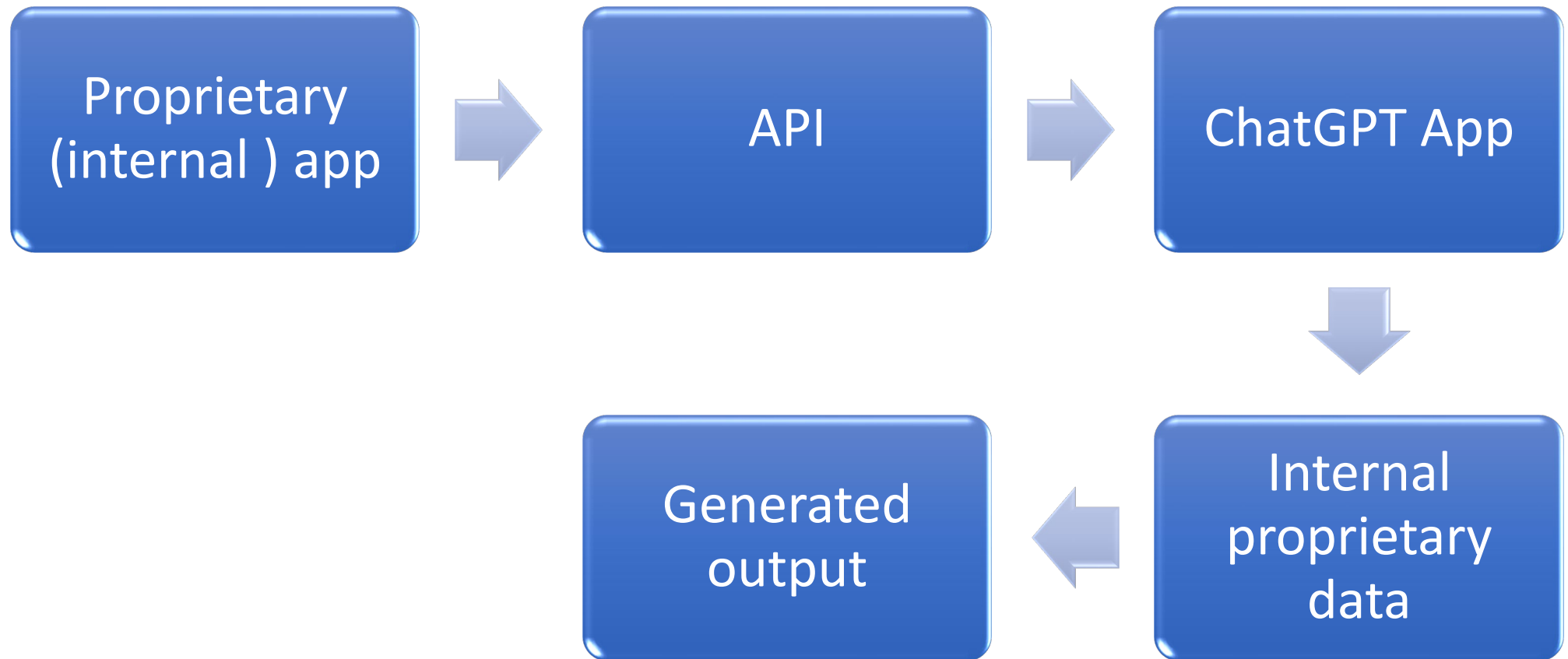
GPT-4 Turbo Released November 2023

- ✓ 128k context window (cumulative chat prompt memory)
- ✓ Analyze uploaded files, including images
- ✓ Text-to-speech (Whisper)
- ✓ Image creation (DALL-E 3)
- ✓ LLM data trained through April

ChatGPT API

- Licensed access to ChatGPT technology by private entities
- **Does not** provide access to ChatGPT dataset
- Uses your **proprietary** information as dataset
- API can be embedded in third party software such as financial and ERP systems

ChatGPT Model With API



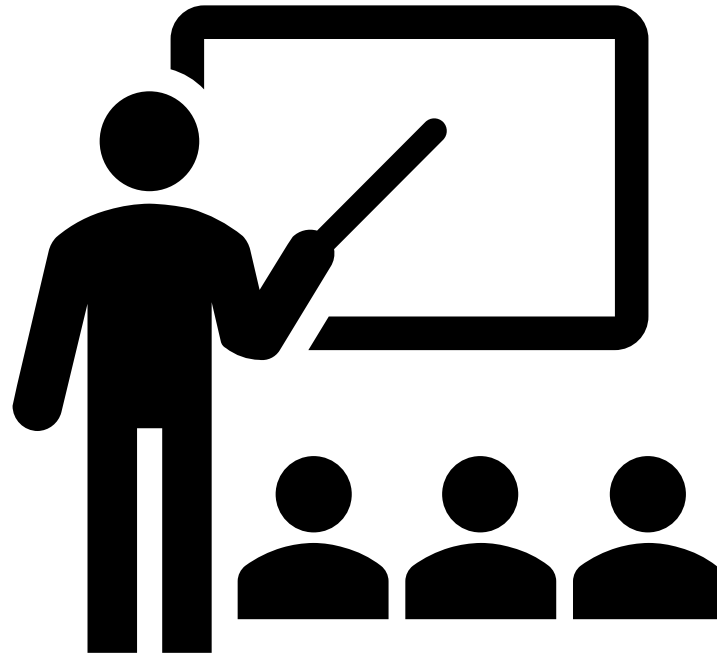
A WORD OF CAUTION



Issues to Beware of With ChatGPT

- Hallucination – generated output that does not correspond to real-world input, resulting in misleading results
- Privacy – Anonymize your prompt input. No PII or confidential information
- Bias – subjective, stereotypes, assumptions, etc.

WRAP-UP



In Summary

- We are at the infancy of this technology
- No one knows how this will evolve
- We should be concerned if the experts are concerned!
- Stay tuned to Microsoft Copilot AI for 365
- Try it!

Questions ?



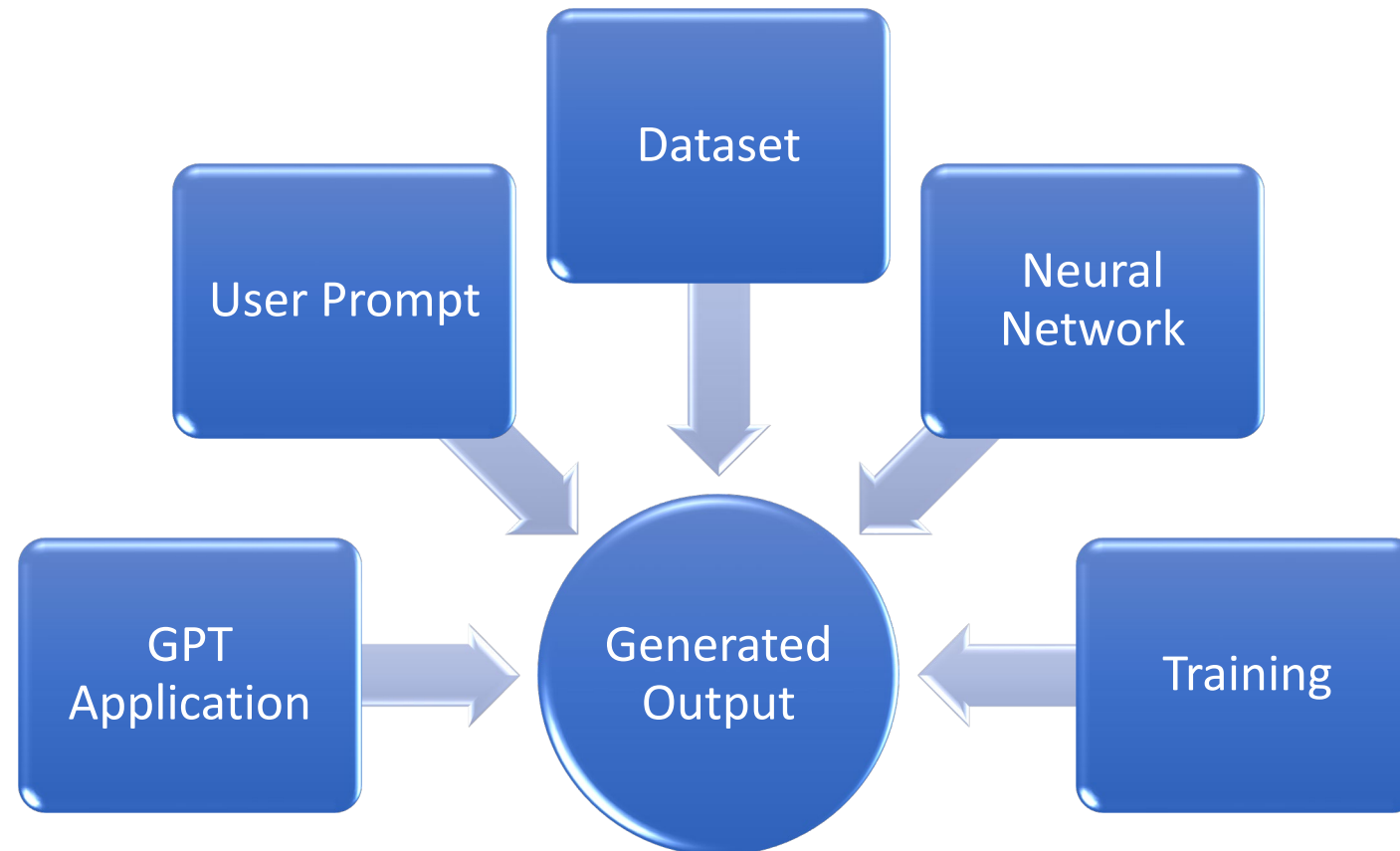
Want to develop your CPA digital skills further?

[Click here](#) to view additional courses offered by Higgins Advisory, LLC through CPA Crossings, LLC

john@higginsadvisoryllc.com

Thank you!!!

FUNDAMENTALS OF GENERATIVE AI TECHNOLOGY



AI – Artificial Intelligence

The development of “intelligent” machines that can perform tasks that typically require human intelligence, such as perception, reasoning, learning, and natural language processing.

Machine Learning

Use of algorithms that enables machines to learn from data and make predictions or decisions based on what it has learned.

NLP - Natural Language Processor

A field of AI that deals with the interaction between computers and human language, enabling machines to understand, interpret, and generate human language output.

LLM – Large Language Model

- An artificial intelligence (AI) model that is designed to generate human-like text.
- Trained on massive amounts of data, such as text from books, articles, and websites, and use complex algorithms to learn patterns in the data and generate text that is like human writing.

GPT - Generative Pre-trained Transformer

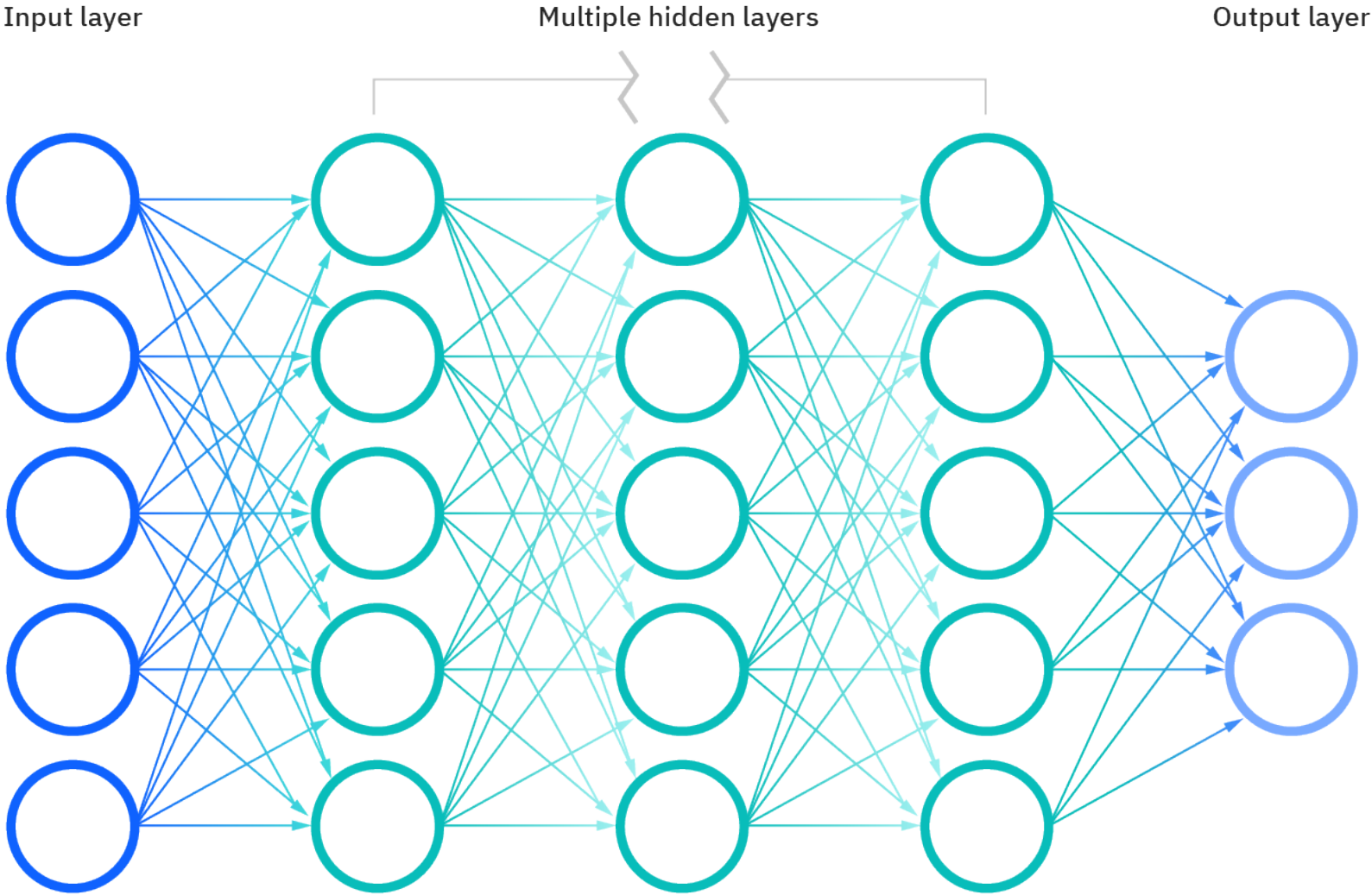
- A type of language model that uses deep learning techniques to generate human-like text
- After reading all this data, the GPT tries to predict the next word in a sentence, using a neural network.
- Achieves greater accuracy over time

Neural Network

Program that helps a computer learn from data and make decisions

Deep neural network

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