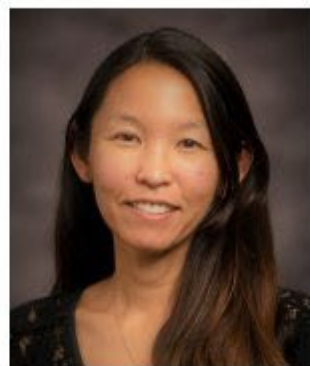




Do Generative AI and Audit Analytics Intersect?

October 3, 2024



ACUA Virtual Learning Director
Wendee Shinsato, CPA, CIA
Assistant Vice Chancellor
California State University



ACUA Virtual Learning Volunteer
Virginia L. Kalil, CIA, CISA, CFE, CRISC
Executive Director/Chief Internal Auditor
University of South Florida



ACUA Virtual Learning Volunteer
Christiana Oppong, CIA, CCSA
Senior Auditor
Princeton University



ACUA Virtual Learning Volunteer
Brenda Auner, CIA, CFE
Senior Auditor
California State University

Do Generative AI and Audit Analytics Intersect

Ken Petersen

October 3, 2024

 Wolters Kluwer



Ken Petersen



- Currently Product Manager of TeamMate Analytics
- 30+ years providing solutions to make professionals work life better
- In the Governance, Risk & Compliance space since 2002
- Listening to auditors and audit organizations
- BSBA from Ohio State, MBA from University of Dayton, PMP certified
- ken.petersen@wolterskluwer.com

Course Description

Will AI replace the auditor? How can we trust AI when it “hallucinates”? Meaning it presents false information as though it is true. In this interactive session we will discuss the role of generative artificial intelligence tools such as ChatGPT, Copilot or ~~Bard~~ Gemini in the world of audit and especially in the world of data analytics within audit.

We will delve into these questions and other AI chatbot related questions providing attendees with many opportunities to provide input on their experiences with various aspects of this topic. This session will be insightful for those at any skill or experience level in audit, data analysis or artificial intelligence

Learning Objectives

Do Generative AI and Audit Analytics Intersect?

1. Identify some of the general advantages and disadvantages of generative AI tools
2. Evaluate areas where generative AI tools can be beneficial in their audit work and where they should be avoided
3. Evaluate if AI is replacing the auditor

A Rapidly Evolving Landscape

OpenAI ChatGPT release history

OpenAI founded in 2015

1. GPT-1 June 2018
2. GPT-2 February 2019 –public release November 2019
3. GPT-3 June 2020
- 4. GPT-3.5 November 30, 2022**
5. GPT-4 March 2023
6. GPT-4o May 2024

AI and Audit Analytics

Polling Question 1

My level of experience with Generative AI tools like ChatGPT, Copilot or others is

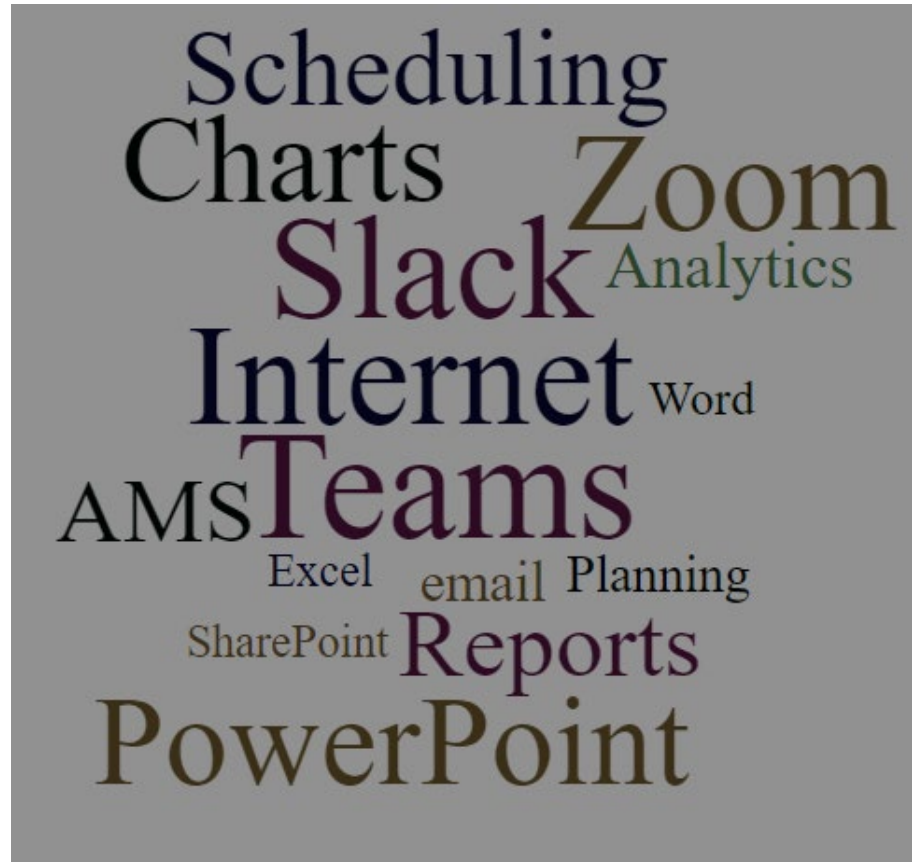
- a. **High** – I use these tools regularly (at least once every few weeks) to help me in various ways
- b. **Medium** – I have used these tools but I do not use them regularly
- c. **Low** – I have not used any of these tools

Is AI going to
replace the
auditor

Why purchase technology?



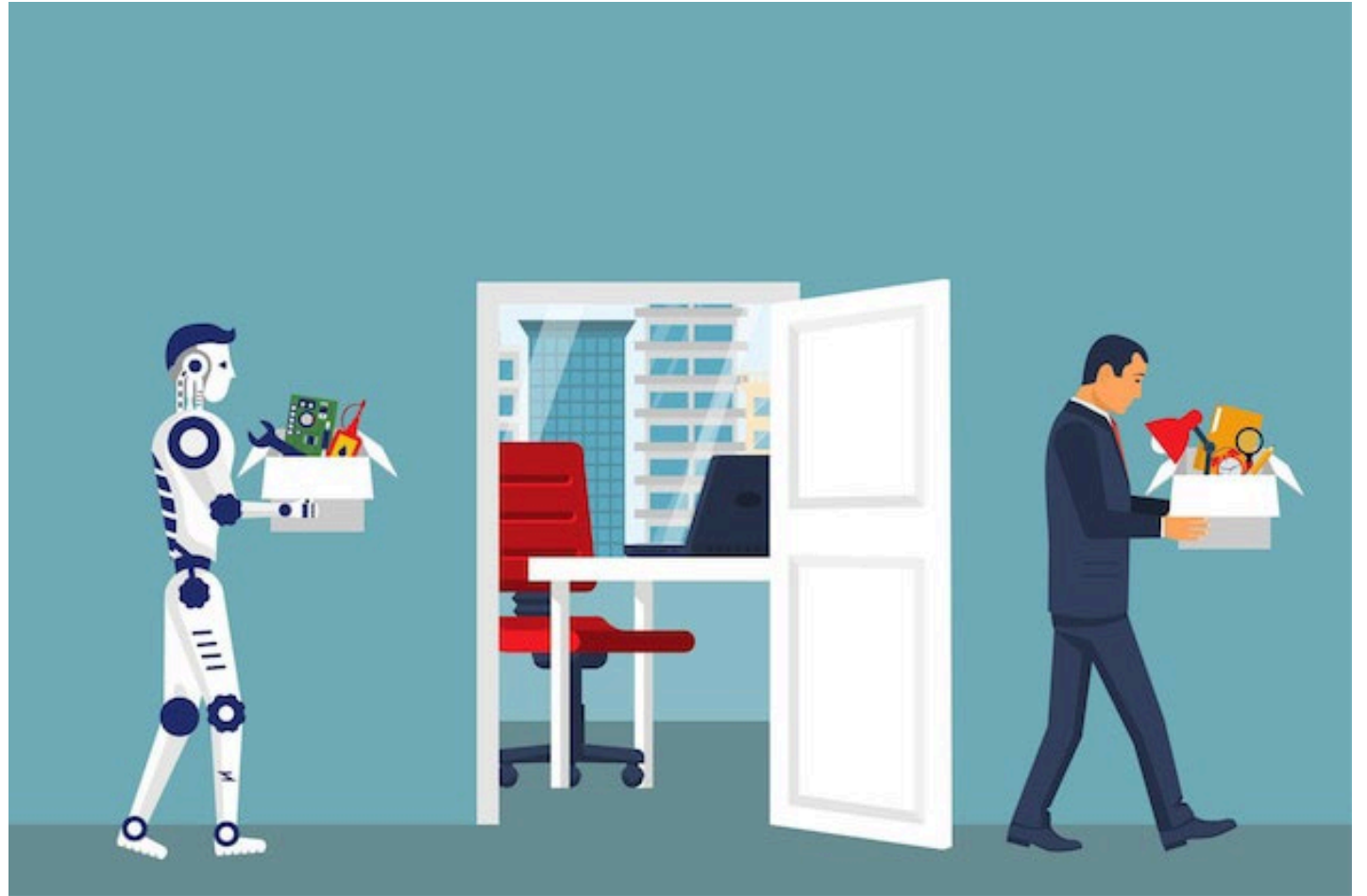
Is AI going to
replace the
auditor



How much
have tools like
these
improved your
efficiency?

Shouldn't you be able to do more
audits with fewer resources?

Is AI going to replace the auditor



Technology efficiencies result in needing fewer staff or creating more output

Is AI going to replace the auditor

“But AI is the most transformative technology we’ve seen”
Really?



AI and Audit Analytics

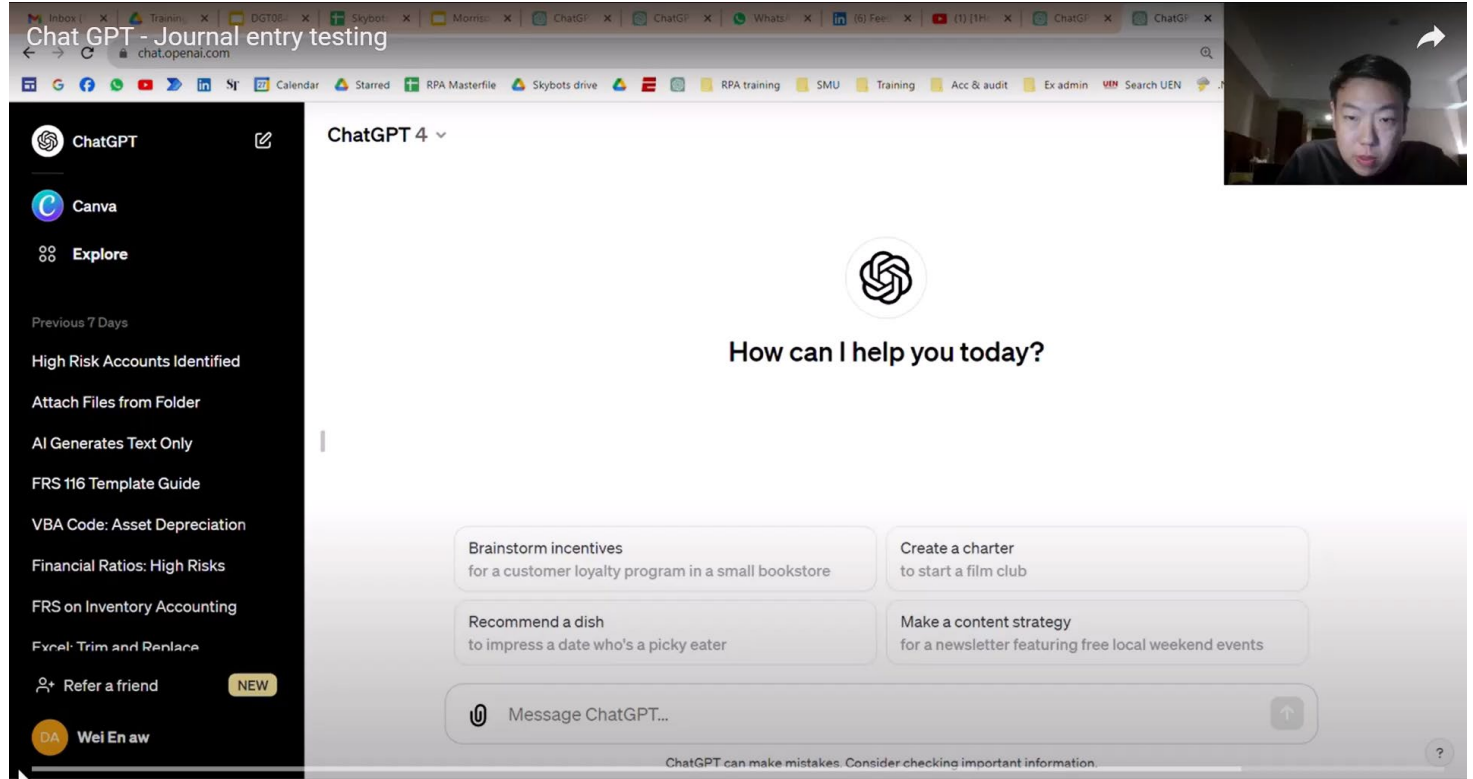
Polling Question 2

My organization has provided guidance to employees about the use of Generative AI tools by

- a. Providing a generative AI tool behind our firewall with guidance for use so we can feel safe that confidential information is secure
- b. Publishing a policy that clearly states when these kinds of tools can be used, for what purposes and the information that can be shared with these tools
- c. Telling employees not to use publicly available generative AI tools or told just don't share confidential information with them
- d. Employees have not been given any direction

AI and Audit Analytics

Example of Audit Analytics and AI



The screenshot displays the ChatGPT web interface. On the left, a dark sidebar contains a list of prompts related to audit and accounting, such as "High Risk Accounts Identified", "Attach Files from Folder", "AI Generates Text Only", "FRS 116 Template Guide", "VBA Code: Asset Depreciation", "Financial Ratios: High Risks", "FRS on Inventory Accounting", and "Excel: Trim and Replace". At the bottom of the sidebar, there is a profile icon for "Wei En aw". The main chat area features the OpenAI logo and the text "How can I help you today?". Below this, there are four suggested prompts: "Brainstorm incentives for a customer loyalty program in a small bookstore", "Create a charter to start a film club", "Recommend a dish to impress a date who's a picky eater", and "Make a content strategy for a newsletter featuring free local weekend events". At the bottom of the chat area, there is a text input field with the placeholder "Message ChatGPT..." and a "Send" button. A disclaimer at the very bottom reads "ChatGPT can make mistakes. Consider checking important information."

AI and Audit Analytics

Polling Question 3

Assuming he did NOT just upload his client's general ledger to the internet I feel

- a. This is fantastic and I would like to start using generative AI tools in this same way on various audits very soon
- b. I think some if this is great, but other aspects of it give me pause
- c. I have serious concerns about the whole thing

AI and Audit Analytics

What happened in the video

- 1) He provided ChatGPT with a data file



You



GPT demo.xlsx
Spreadsheet



ChatGPT

Great! You've uploaded a file named "GPT demo.xlsx." How can I assist you with this file?



AI and Audit Analytics

What happened in the video

- 2) He “prompted” ChatGPT with
 - a) You are an auditor
 - b) The file provided is a general ledger
 - c) Look for fraud



You

You are an auditor. You are given the excel file with the sheet name "data". It contains the general ledger for my audit client. analyse the jounrnal entries and identify any transactions that are possibly fradulent

AI and Audit Analytics

What happened in the video

3. ChatGPT interpreted the file (it understood the data)



ChatGPT

The Excel sheet "Data" from the file you provided contains journal entries with various details like date, type, reason, journal entry number, trial balance (TB) account number, TB name, description, debit and credit amounts, tax, and the person who posted the entry. To analyze these journal

AI and Audit Analytics

What happened in the video

4. I'm going to run the following tests

debit and credit amounts, tax, and the person who posted the entry. To analyze these journal entries for potential fraudulent activities, I'll look for common red flags such as:

1. **Unusual Transaction Sizes or Frequencies:** Transactions that are significantly larger or more frequent than normal.
2. **Round Amounts in Large Transactions:** Large transactions that are rounded to the nearest hundred or thousand can be suspicious.
3. **Entries Posted by the Same Individual Repeatedly:** Especially in sensitive accounts.
4. **Entries at Unusual Times:** Such as late at night or on weekends.
5. **Mismatched or Inconsistent Information:** Inconsistent reasons or descriptions for similar account movements.
6. **Accounts Used:** Certain accounts are more prone to fraudulent activities.

AI and Audit Analytics

What happened in the video

5. It performs the tests

The analysis of the journal entries from the "Data" sheet reveals several points of interest:

1. Debit and Credit Transaction Statistics:

- The mean and standard deviation for debits are approximately 946.35 and 1669.36 respectively.
- For credits, the mean and standard deviation are approximately -1366.94 and 1894.77 respectively.
- This suggests a wide range of transaction values, indicating the need for further scrutiny of outliers.

2. Round Amounts in Large Transactions:

- There are 2 debit transactions that are round amounts and are above the threshold of 1000.
- No credit transactions meet this criterion.

3. Repeated Postings by the Same Individual:

- Several individuals have posted multiple entries to the same account. For instance, 'Jeff' posted multiple entries to account number 2000 and 2514.
- This could be normal, but repeated postings by the same individual to sensitive accounts warrant closer inspection.

4. Entries Made at Unusual Times:

- There are 3 entries made at unusual times (either weekends or late evenings).
- This might indicate a need to investigate the context of these transactions.

5. Mismatched or Inconsistent Information:

- There are multiple instances where the same account number has different reasons listed for transactions. For example, account 2000 has been used for 'Debit', 'Tax', and 'Transfer' reasons.

Based on these findings, it would be prudent to conduct a more in-depth review of the transactions, especially those that are outliers in terms of size, those made at unusual times, and those with inconsistent reasons. Further investigation, such as reviewing supporting documentation and interviewing responsible staff, might be necessary to determine if any of these transactions are indeed fraudulent. [↔]

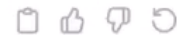


AI and Audit Analytics

What happened in the video

ChatGPT can make mistakes. Consider checking important information.

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 Message ChatGPT... 

ChatGPT can make mistakes. Consider checking important information.

AI and Audit Analytics

Advantages

1. Generative AI providing suggestions for tests to perform
2. OK as a second set of eyes, to compare results with
3. Suggest “caveats” – investigate further...

Disadvantages

1. Provide the auditor with opportunities to control each step
2. “ChatGPT can make mistakes. Consider checking important information.”
 - a. Gen AI is known to hallucinate
 - b. Reperformance can be an issue
 - c. Is a random sample from Gen AI truly random?

AI and Audit Analytics

Polling Question 4

My organization would allow us to use Gen AI provided by my audit management system in a secure environment

- a. As long as our current terms for data security and privacy still applied
- b. Only after a rigorous IT audit and/or additional legal terms
- c. We would not be allowed to use it

AI and Audit Analytics

What we are hearing



AI and Audit Analytics

What we are hearing

- Suggest tests to perform (analytics or others)
- Create analytics tests in an analytics tool, use GenAI as a second check
- Suggest risks I should consider
- Suggest a risk and control matrix
- Create my risk and control matrix
- Write my audit report (create a draft for me to modify)
- Summarize large process documents received from the business
- And more

Thank you!

Q&A



ken.petersen@wolterskluwer.com

www.TeamMateSolutions.com



Announcements

Upcoming ACUA Webinars

Month	Date & Time	Presenter	Topic
October	10/17/24 1:00pm EST	Baker Tilly	Information Security
December	12/5/24 1:00pm EST	Baker Tilly	Compliance Hot Topics

See the ACUA website for more details: www.ACUA.org



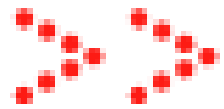
Announcements

IIA Global Standards Self-Assessment Tool Available!

Check out the IIA Global IA Standards Self-Assessment tool recently created by the ACUA Auditing & Accounting Principles Committee. The tool is in the Resource Library > Audit Shop Resources > New IIA Global IA Standards. We hope you find this resource valuable as you prepare for the Standard changes!

The screenshot shows a file management interface. At the top, there is a search bar with the placeholder text "Term / Keyword / Phrase". Below the search bar, the current folder is identified as "New IIA Global IA Standards". The interface includes a "Filter By" dropdown set to "File Type" and a "Sort By" dropdown set to "Title A-Z". A file is displayed with the title "ACUA AAP - IIA GLOBAL STANDARDS 2025 - SELF-ASSESSMENT TOOL" and a subtitle "#SelfAssessment#IIAStandards2025". The file icon is a grid with a green 'X' in the bottom right corner. To the left, a navigation pane shows a tree structure with "Main" selected, and "Resource Library" and "Academic Medical Centers" as sub-items. In the bottom right corner of the file view, there are statistics: "Downloads • 2" and "Views • 6".

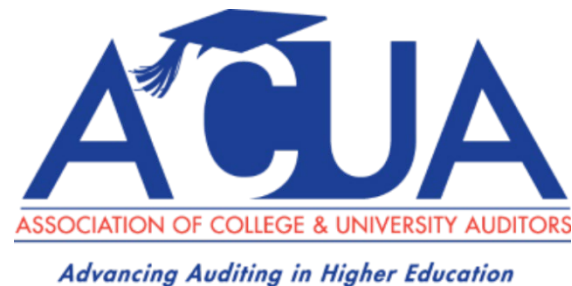
See the ACUA website for more details: www.ACUA.org



New Kick Starter Available!

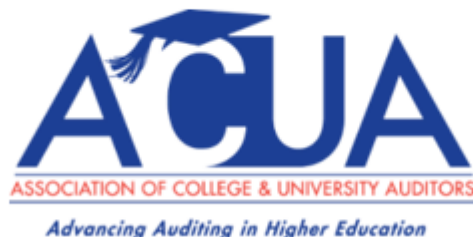
Internal Quality Assessments under the IIA Global Internal Audit Standards

Download today in the members-only Audit Tools section of www.ACUA.org





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Stay Updated

- The College and University Auditor is ACUA's official journal. Current and past issues are posted on the ACUA website.
- News relevant to Higher Ed internal audit is posted on the front page. Articles are also archived for your reference under the Resources/ACUA News.

Get Educated

- Take advantage of the several FREE webinars held throughout the year.
- Attend one of ACUA conferences:
Audit Interactive (Spring 2025)
AuditCon (Fall 2025)
- Contact ACUA Faculty for training needs.

Get Involved

- The latest Volunteer openings are posted on the front page of the website.
- Visit the listing of Committee Chairs to learn about the various areas where you might participate.
- Nominate one of your colleagues for an ACUA annual award.
- Submit a conference proposal.
- Present a webinar.
- Become a Mentor
- Write an article for the C&U Auditor.
- Write a Kick Starter.

Connect with Colleagues

- Subscribe to one or more Forums on the Connect ACUA to obtain feedback and share your insights on topics of concern to higher education internal auditors.
- Search the Membership Directory to connect with your peers.
- Share, Like, Tweet & Connect on social media.

Solve Problems

- Discounts and special offers from ACUA's Strategic Partners
- Kick Starters
- Risk Dictionary
- Mentorship Program
- NCAA Guides
- Resource Library
- Internal Audit Awareness Tools
- Governmental Affairs Updates
- Survey Results
- Career Center.....and much more.



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