The Intersection Between Generative AI and Analytics for Public Sector Agencies

Jo Dale Guzman, Director of Strategy and Operations

Cat Day, General Counsel

Texas State Auditor's Office

Agenda

- Brief Background on Generative AI

- How the Texas State Auditors Office has incorporated AI into their audit processes.

  - Developing a Generative AI Policy
  - Policy Implementation and Staff Training
  - Generative AI Use Cases in Audit
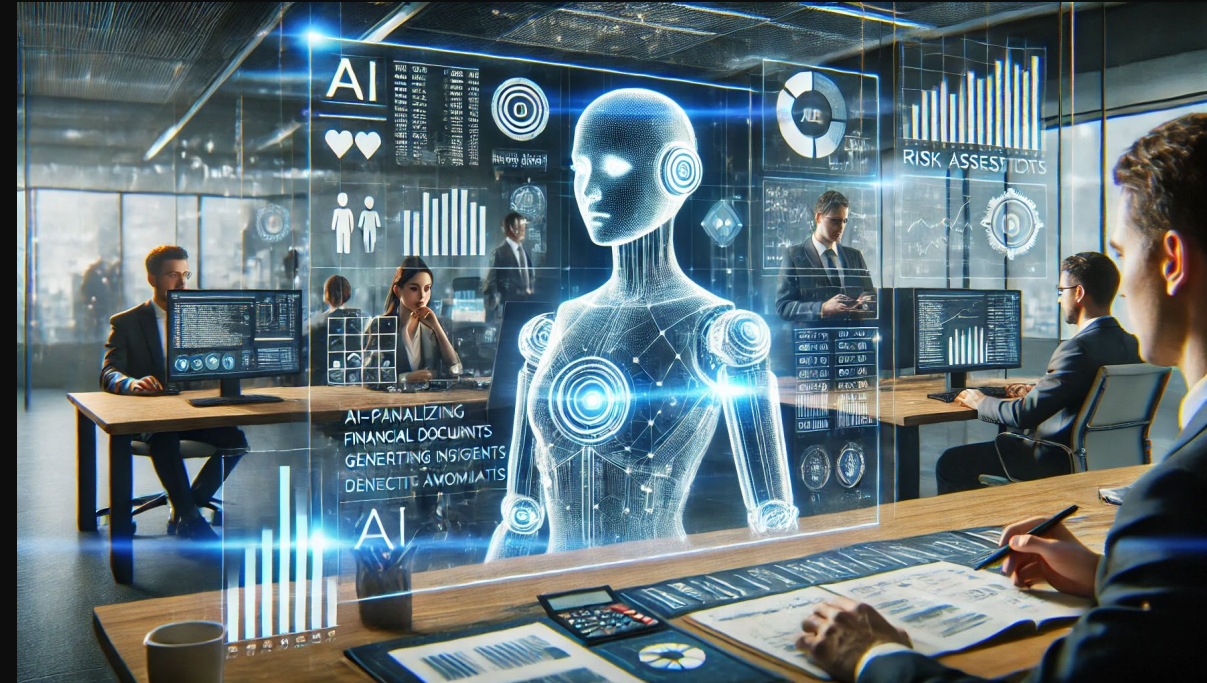 - Key Takeaways
  - References to Further AI Trainings

Image created using ChatGPT 4o model with the prompt, "Create an image depicting generative AI in audit."

A rapidly evolving landscape

OpenAI ChatGPT Model Release History

OpenAI founded in 2015

Model Release Dates:
- GPT-1: June 2018
- GPT-2: November 2019
- GPT-3: June 2020
- **GPT-3.5: November 30, 2022**
- GPT-4: March 2023
- GPT-4o: May 2024
- GPT-o1: December 2024
- GPT-o3-mini: January 2025
- GPT-4.5: February 2025
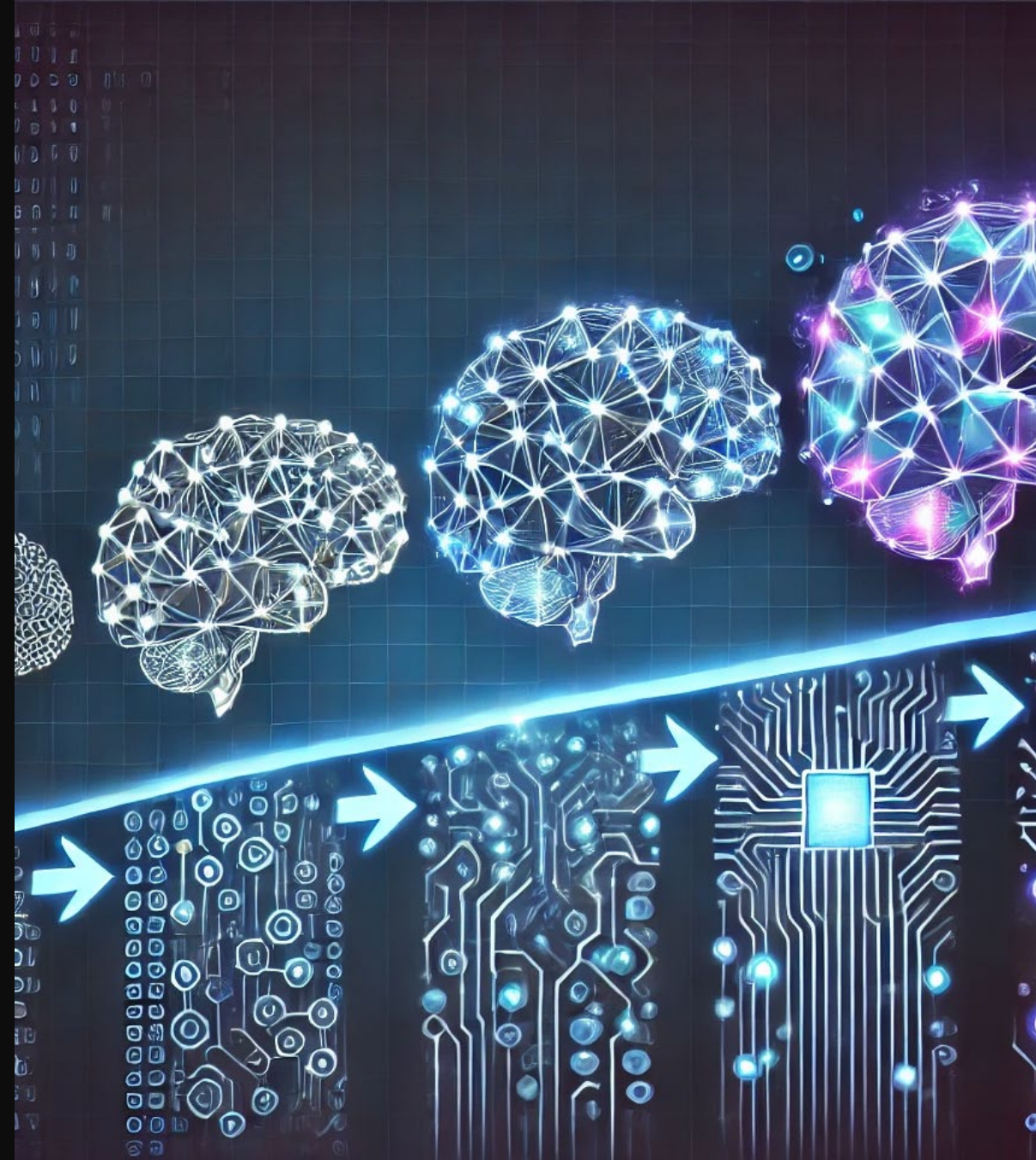
Generative AI & Governmental Auditing

Advantages

Increases Efficiency

Increases Brainstorming and Risk Assessment

Enhances research and criteria identification

Increases Technical Learning & Capabilities

Enhances Document Analysis and Text Extraction

Assists with writing and tone

Disadvantages

Data Security

Hallucinations

Lack of Transparency

Bias and Ethical Concerns

Potential Costs and Complexity of Models

Over-Reliance and Skill Erosion

Generative AI

At the Texas State Auditor's Office
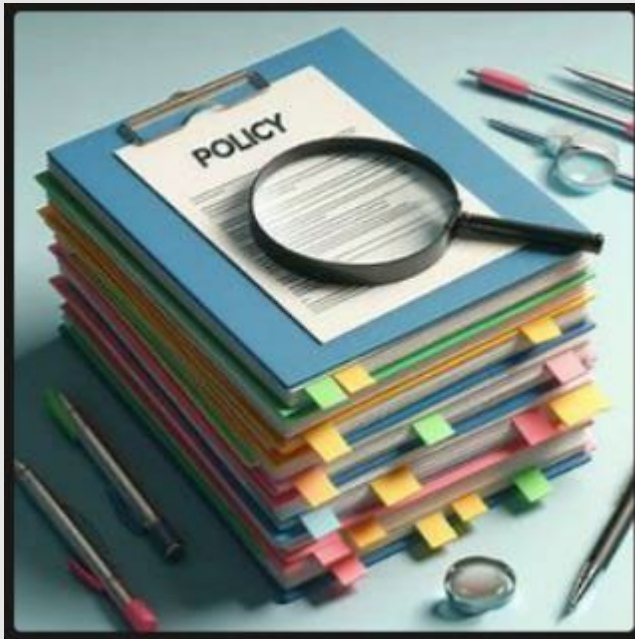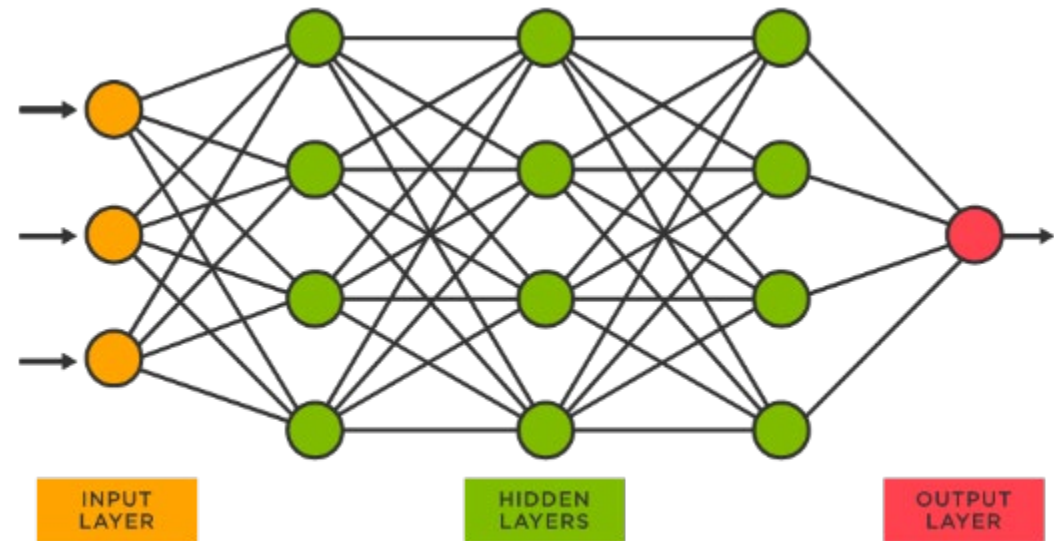
AI at the Texas State Auditor's Office

Image above created with Copilot Designer using the prompt "policy documentation" powered by DALL E 3.

The Texas SAO Generative AI Policy

Why we developed it

- o Staff may find a way to use AI tools regardless

- o Needed a policy to encourage appropriate use of generative AI for business purposes

AI at the Texas State Auditor's Office

Image above created with ChatGPT 4o using the prompt "Create an image of an AI Task Force".

The Texas SAO Generative AI Policy

How we developed it

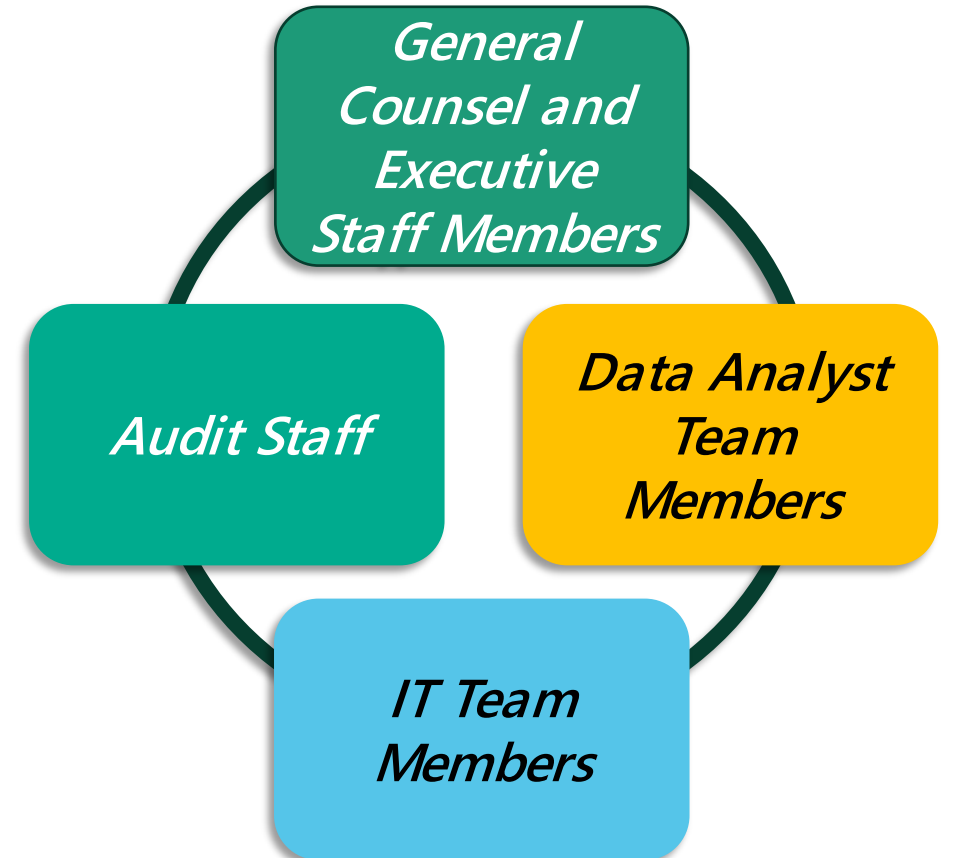**We built an AI Task Force that conducted extensive research on emerging AI Technology and Tools.**

General Counsel and Executive Staff Members

Data Analyst Team Members

Audit Staff

IT Team Members
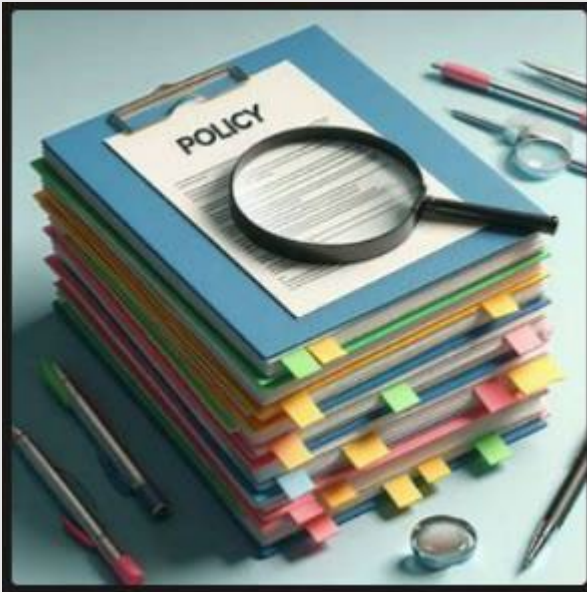
AI at the Texas State Auditor's Office

Image above created with Copilot Designer using the prompt "policy documentation" powered by DALL E 3.

The Texas SAO Generative AI Policy

Brief overview of the policy details

- o The use of Generative AI is neither encouraged nor prohibited

- o SAO employees may use generative AI as an assistant to work, not a replacement

- o List of Acceptable & Unacceptable Uses

- o Employees must obtain approval to use AI for Audit and Non-Audit projects

- o Limitations

- o Data Protection and Security

- o SAO AI Officer and Monitoring

- o Violations of Policy

AI at the Texas State Auditor's Office

Image above created with Copilot Designer using the prompt "policy documentation" powered by DALL E 3.

Examples of Acceptable and Unacceptable Uses of Generative AI at the Texas State Auditor's Office

| Examples of Acceptable Uses of AI	Examples of Unacceptable Uses of AI
+ Researching audit risks for various topics	X Uploading client data or SQL queries to an AI tool
+ Describing unfamiliar concepts, such as IT topics, SQL functions, and Excel formulas	X Asking questions that would put a client's sensitive information at risk
+ Researching background questions for planning interviews	X Asking an AI tool to perform testing for you
+ Drafting email templates	X Drafting reports

AI at the Texas State Auditor's Office

Image above created with ChatGPT 4o using the prompt "Create an image of a staff training for generative AI".
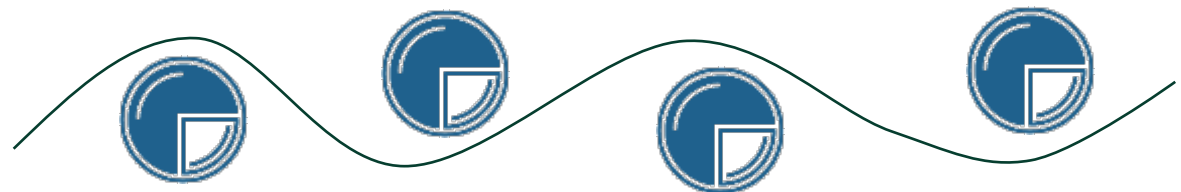
Generative AI Policy Implementation

Staff training

- 3 office-wide trainings upon the policy rollout in September of 2023
- Incorporated Generative AI Training into Employee Onboarding
- Refreshed Training and Offered to all employees again in FY 2024
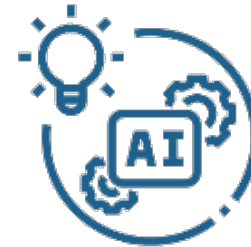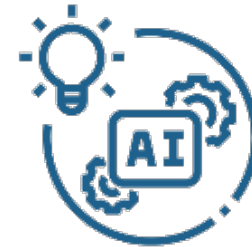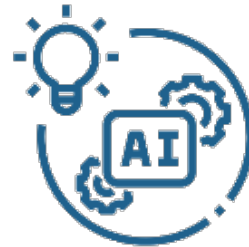
- Established a Monthly AI User Group to share ideas and discuss new developments

AI at the Texas State Auditor's Office

Image above created with ChatGPT 4o using the prompt "Create an image of an instructor providing an AI training to a classroom of government auditors in a modern professional setting".

Generative AI Policy Implementation

Overview of Staff Training

- What is AI and Generative AI?
- What is ChatGPT?
  - How does it work?
- Considerations when using AI Tools
- SAO Generative AI Policy Walkthrough
- Examples of Acceptable and Unacceptable Uses
- Risks of Using AI Tools
  - Data Security
  - Hallucinations
- Prompt Engineering
- Walkthrough of AI Tools with SAO Accounts
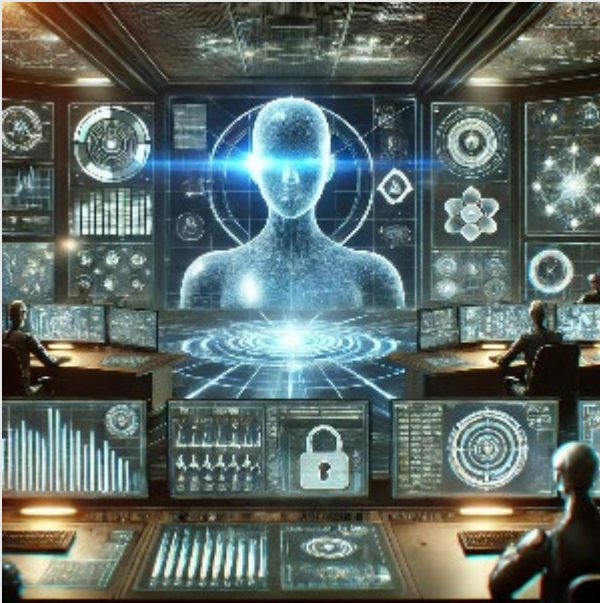
AI at the Texas State Auditor's Office

Image above created with ChatGPT 4o using the prompt "Create an image of AI monitoring."

Establishing the Role of the AI Officer

- Monitoring Responsible AI Tools Usage

- Ongoing Trainings/Answering Questions and meeting with teams/individuals to walk-through usage

- Providing Quarterly Updates to Staff
  - Keeping up with technology advancements
  - Opportunities for Information Sharing among staff

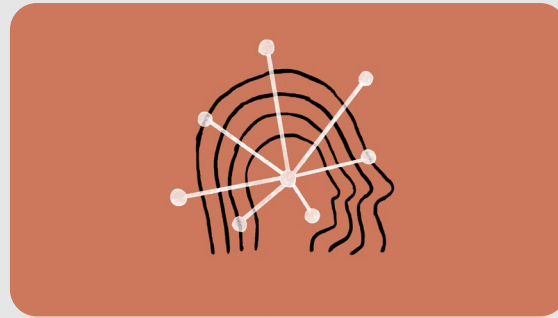- Speaking to the Legislature and other agencies

Using Gen AI

At the Texas State Auditor's Office

AI Tools at the Texas State Auditor's Office

ChatGPT

Claude

DataSnipper
(Excel Add-in)

Copilot Studio
(Currently exploring)

AI at the Texas State Auditor's Office

Image above created with ChatGPT 4o using the prompt "Create an image of AI in audit."

Using Generative AI in Audit

- **Research Assistance**
  - Conduct preliminary research on agencies and programs
  - Increases efficiency early in projects
  - Enhances initial client interviews

- **Technical Assistance**
  - Help with Excel Functions
  - SQL and Python decoding
  - DAX Coding – Power BI

- **Writing Assistance**
  - Report templates
  - Emails

- **Document Analysis**
  - Text Extraction
  - Version Comparison

- **Creating GPTs**

Creating GPTs
Using ChatGPT and Publicly Available Data Sources

SARA – State Audit Research Assistant

ERICA – Classification Assistant

Texas SAO Audit Report GPT

Texas Sunset Commission Reports GPT

Yellow Book GPT

SARA (State Audit Research Assistant)
By community builder

A research assistant for state government auditors.

| What statutes are applicable to public safety programs? | Find funding details for the Texas Attorney General's... | What legal authority governs the state bond... | Summarize Article III - Education funding highlights. |

Ask anything

ChatGPT can make mistakes. Check important info.
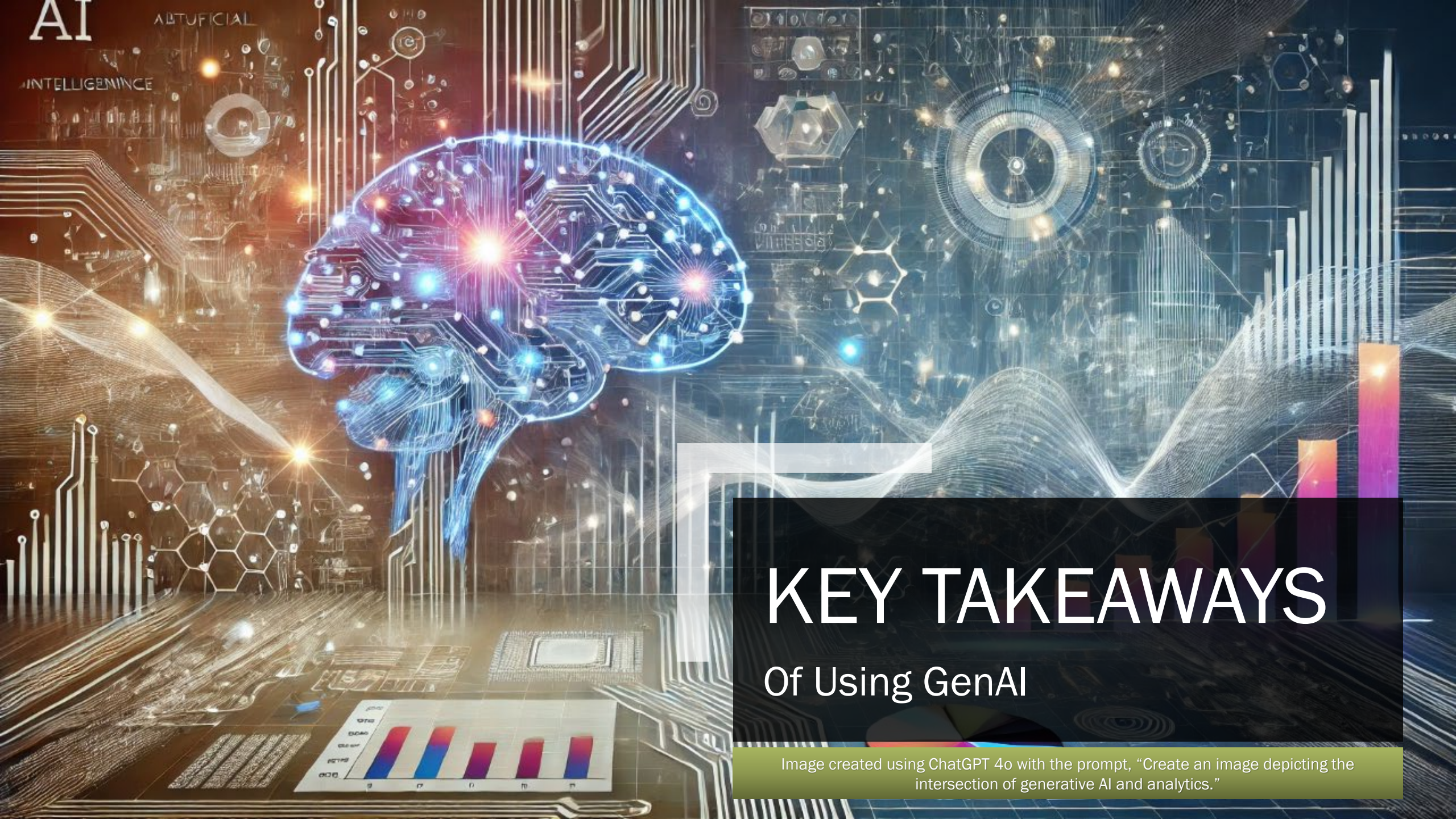
AI at the Texas State Auditor's Office

Image above created with ChatGPT 4o using the prompt "Create an image of innovating with AI in audit."

What's next?

Innovating with AI at the Texas SAO

- Creating more custom GPTs

- Machine Learning Models for Risk Assessment

- Fine-tuning Large Language Models

- Utilizing AI for Image Creation/Report Graphics

KEY TAKEAWAYS

Of Using GenAI

Image created using ChatGPT 4o with the prompt, "Create an image depicting the intersection of generative AI and analytics."

Key Takeaways

Image above created with ChatGPT 4o using the prompt "Create an image of using AI tools."

Considerations when using AI Tools

<mark>Start Somewhere – Responsibly!</mark>

- **Low Barriers to Entry**
  - Many generative AI tool are user friendly and require minimal technical expertise
  - Many tools start with free options

- **Experiment (safely)**
  - Use publicly available datasets
  - Research agencies, programs, topics, etc.

- **Start Small**
  - Begin with simple tasks, such as researching, brainstorming ideas, drafting emails, etc.

- **Invest time in Prompt Engineering – designing prompts to get the information you want.**
  - Give AI a role to play
  - Provide detailed instructions on what you would like it to do
  - Provide background context

- **Stay Informed on Ethics and Compliance**
  - Understand your agencies policies and best practices to ensure responsible use

Key Takeaways

Image above created with ChatGPT 4o using the prompt "Create an image in portrait mode depicting data security in AI."

Data security & privacy

- While this is a critical topic, we could use the whole session length and not cover everything.

- Key is to educate yourself on requirements around data security and privacy and make sure your team is using these tools responsibly.

- **Main Takeaway**: Do not upload sensitive information to open-source AI tools.

- Establish ways to monitor the use of AI tools in your office.

AI training resources

- Learning services from organizations like DataCamp
  https://www.datacamp.com/

- Google AI and Data Analytics Certificates
  Learn AI & machine learning - Grow with Google
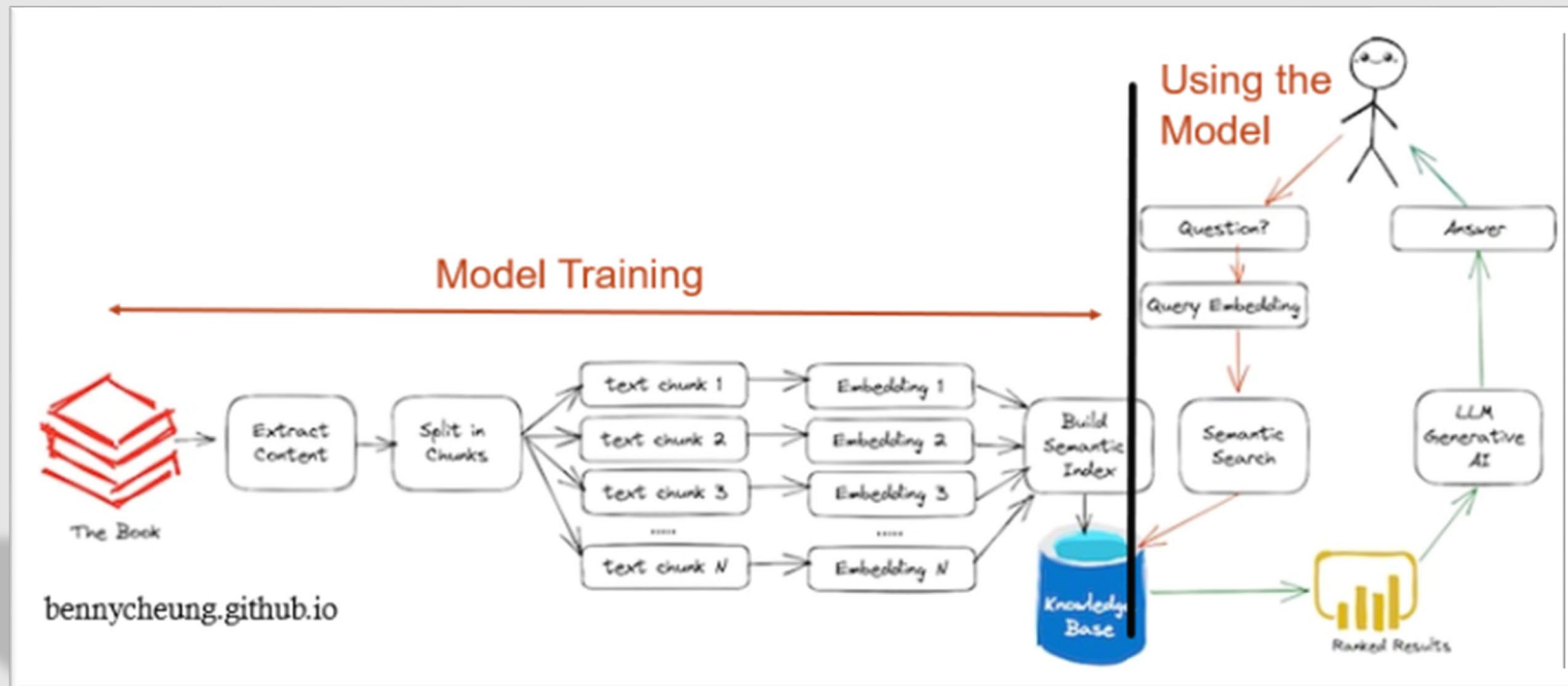
Thank you!

Q&A

Jodale.guzman@sao.texas.gov

Cathleen.day@sao.texas.gov