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Automation And AI: Use Cases And What's In It For You

Revolutionizing Finance and Accounting

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Introduction

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Learning Objective

At the end of the session, you will be able to:

- Identify how automation can improve operations

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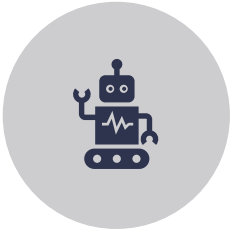
Key Objectives

Understanding the Basics of AI and Automation: Gain a comprehensive understanding of how AI and automation technologies work, specifically in the context of accounting and finance



Exploring Real-World Use Cases: Discover a range of practical use cases of AI and automation in financial processes

Benefits and Impact on Efficiency: Learn how implementing AI and automation can significantly improve efficiency, reduce errors, further organizational mission, and improve the lives of the workforce

Future Trends and Adaptation Strategies: Gain insights into how your organization can adapt and stay ahead in this rapidly evolving field, including strategies for implementation and overcoming potential challenges

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Agenda

- Understanding the Basics
- Benefits
- Use Cases
- How to Implement
- Future Trends
- Demonstration of tools
- Q & A

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Polling Question

How Transformative Do You Believe AI Will Be?

A: I think it’s overhyped and unlikely to make much change.

B: Cautiously optimistic for how it will change how we work.

C: This is the fifth industrial revolution.

D: I don’t know enough to say but I want to know more.

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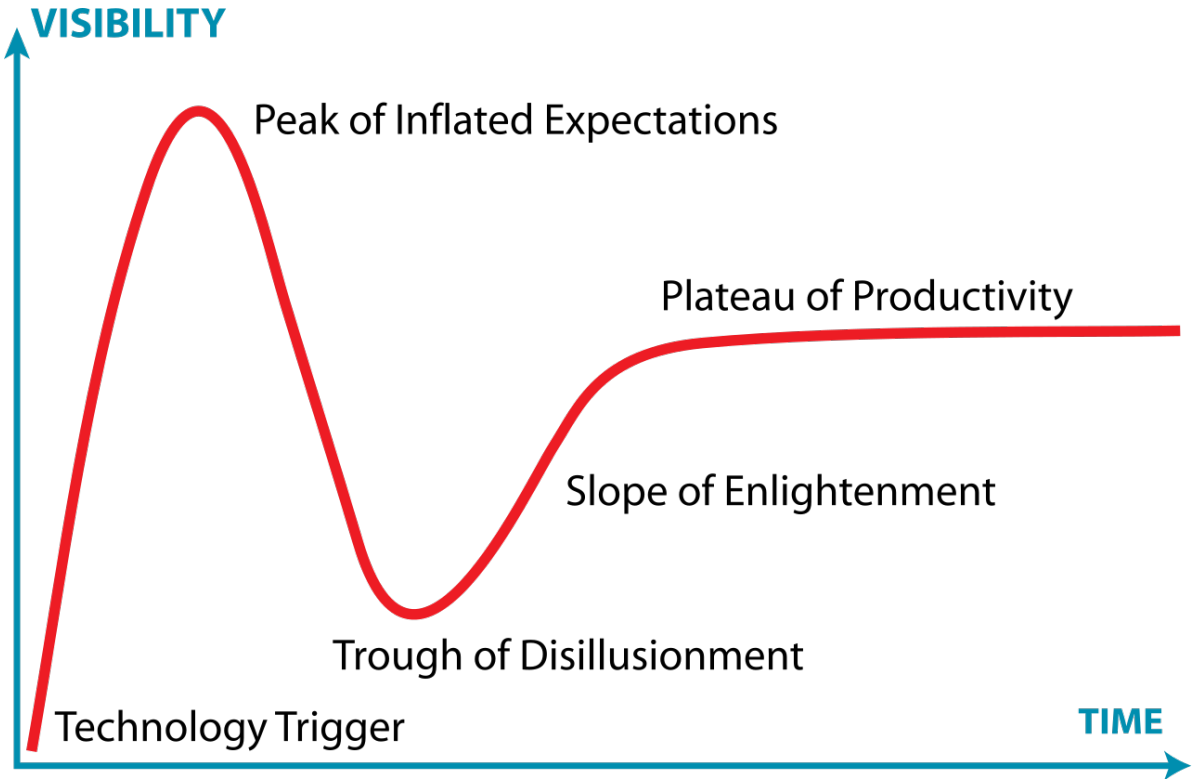
Gartner Hype Cycle



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An Introduction Into Data, Automation, & AI

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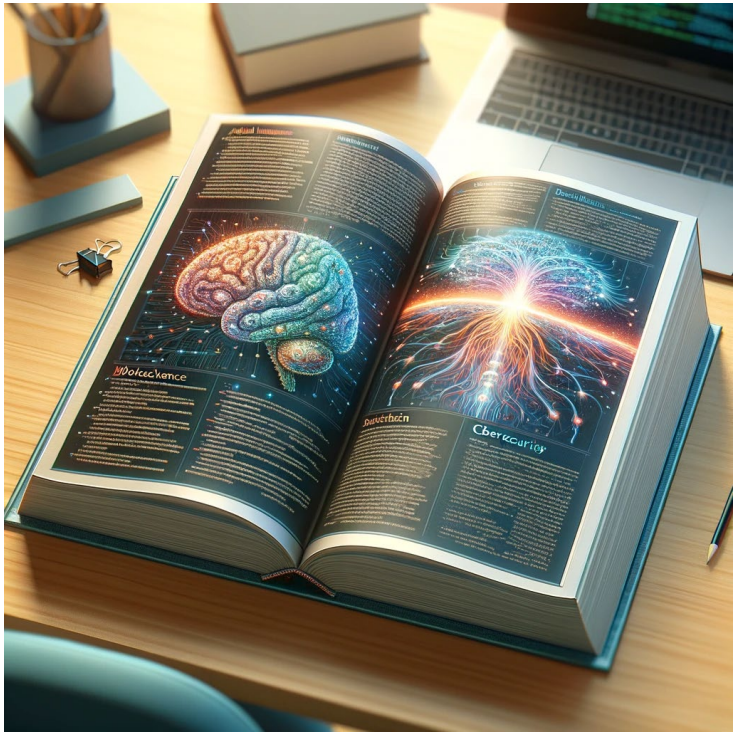
Definitions

- Data and Business Intelligence
- Automation
- AI & Generative AI
- Large Language Models



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Data & Business Intelligence

- **Data** is the raw, unprocessed facts and statistics collected together for reference or analysis. In government, it is anything quantifiable and measurable, such as budget numbers, crime number, population demographics, and EMS statistics as examples. Data is the foundation to gain knowledge to make strategic decisions. Data is neutral and must be processed and analyzed to create value.

- **Business Intelligence** are the tools, technologies and methodologies used to collect, integrate, analyze and present the data as business information. BI is to help make better decisions through the transformation of data into actionable knowledge. This is done through visualization, analysis, historical and predictive trending, and performance management.

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Automation

Automation is the technique, method, or system of operating or controlling a process by highly automatic means reducing human intervention to a minimum. In Government environment this is seen in various reporting, integrating systems, computer vision and the implementation of large language models.

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Manual Vs. Automated Reporting

A Comparison

Manual

- 80% of reporting is ad hoc, 20% standardized
- Time consuming
- Prone to errors
- Inconsistent
- Dependent on individuals

Automated

- 80% standardized, 20% ad hoc
- Time Saving
- More accurate
- Real time
- Scalable

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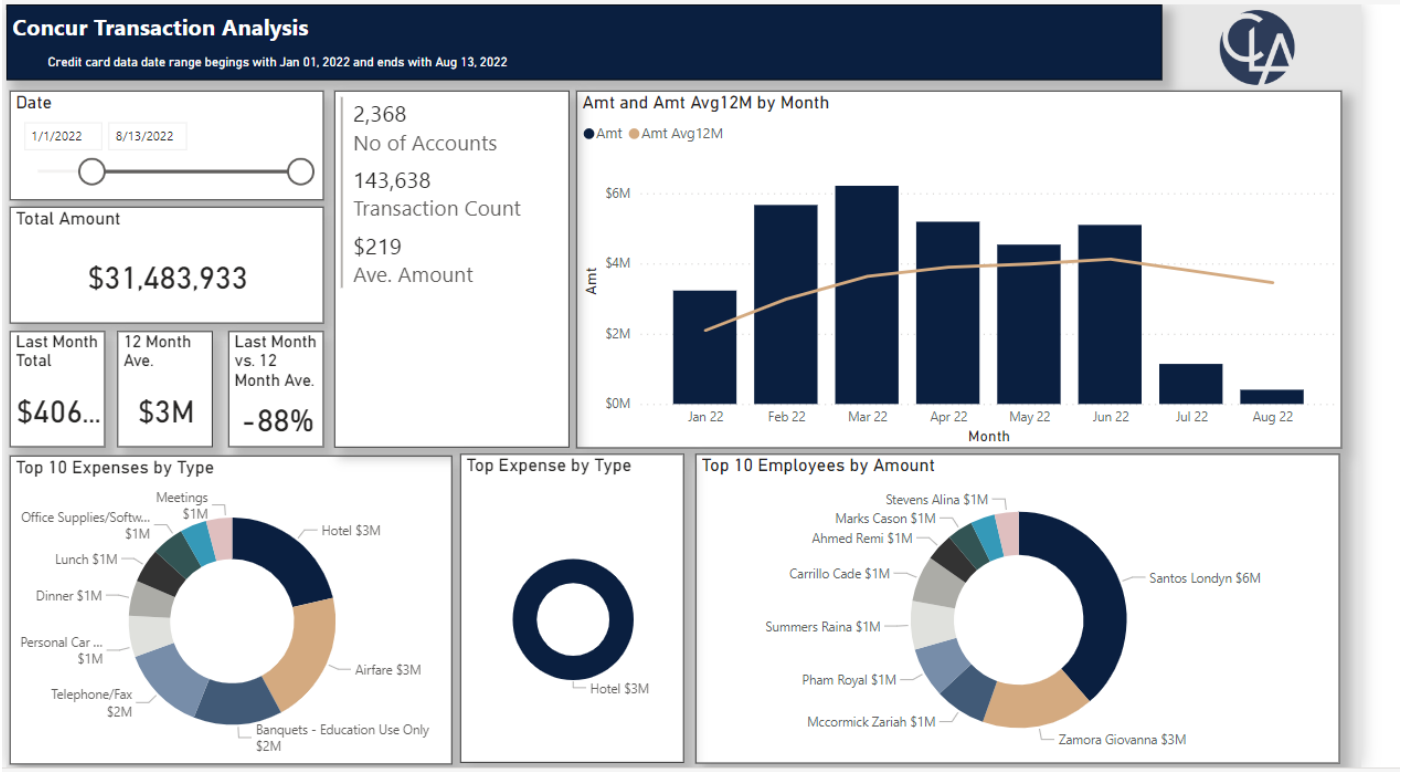
Example Of BI And Automation



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What Is Artificial Intelligence?

- AI is the ability of a computer, or a robot controlled by a computer, to do tasks that are usually done by humans because they require human intelligence and discernment
- AI models are programs that analyze data sets and make predictions. AI modeling replicates human decision making and is more accurate and effective when it receives/trains on multiple data points
- Types of AI
  - Automated Data Capture - AP Automation
  - Recommendation/Personalization - Amazon, Netflix, etc
  - Generative – content creating AI like ChatGPT
  - Anomaly Detection – fraud alerts
- AI is a tool to supplement and augment daily functions to become more productive/helpful/resourceful

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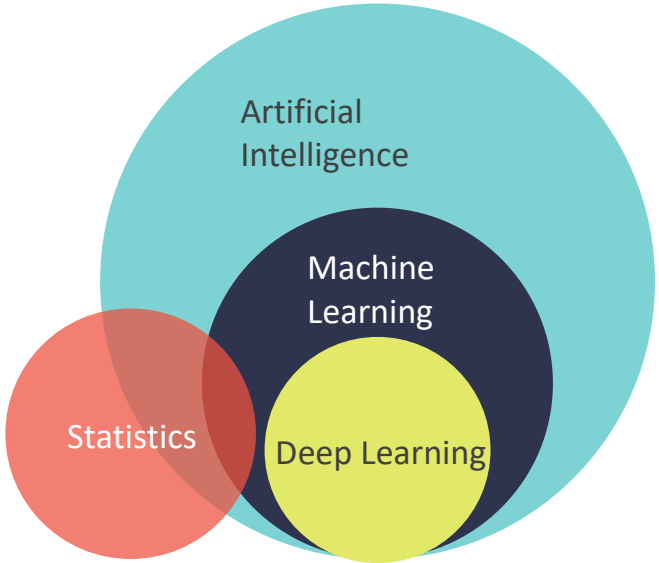
Comparing Traditional Computing Vs. AI

- Traditional Computing: Set of explicit instructions for a specific task
- Artificial Intelligence (AI): Machines learning and making decisions from data
  - Machine Learning
  - Deep Learning
  - Statistics



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What Is a Large Language Model?

- LLMs are a specific type of AI focused on understanding, generating, and working with human language. They are trained on vast amount of text data to predict the next word in a sentence, understand context, answer questions and more.
- Example is Generative Pre-trained Transformers (GPT) – focused on a particular set of content or material, for example your agency policies and procedures.

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What Is GPT?

- GPT is a kind of Large Language Model: Able to generate novel, human-like text, write code, and create datasets
- Goal of GPT project was to create chat agent that can interact conversationally, generate coherent, relevant content, answer follow up questions.
- Trained on websites, books, and online material.
- Human AI trainers helped GPT models provide more desirable outputs via reinforcement learning.
- OpenAI released ChatGPT November 2022
- Many updates and other new generative AI apps & services

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GPTs

OpenAI

- ChatGPT 3.5
- ChatGPT 4.5
- Custom GPTs
  - Image generation
  - Academic research
  - Coding

Other Organizations

- Google Bard & Gemini
- Facebook & Instagram Messenger
- Snapchat AI Chatbot
- Many research orgs & startups developing models & tools

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AI Today – Audience Participation

- Can you give examples of AI in your daily personal or professional life today? Scan QR code and send answers!

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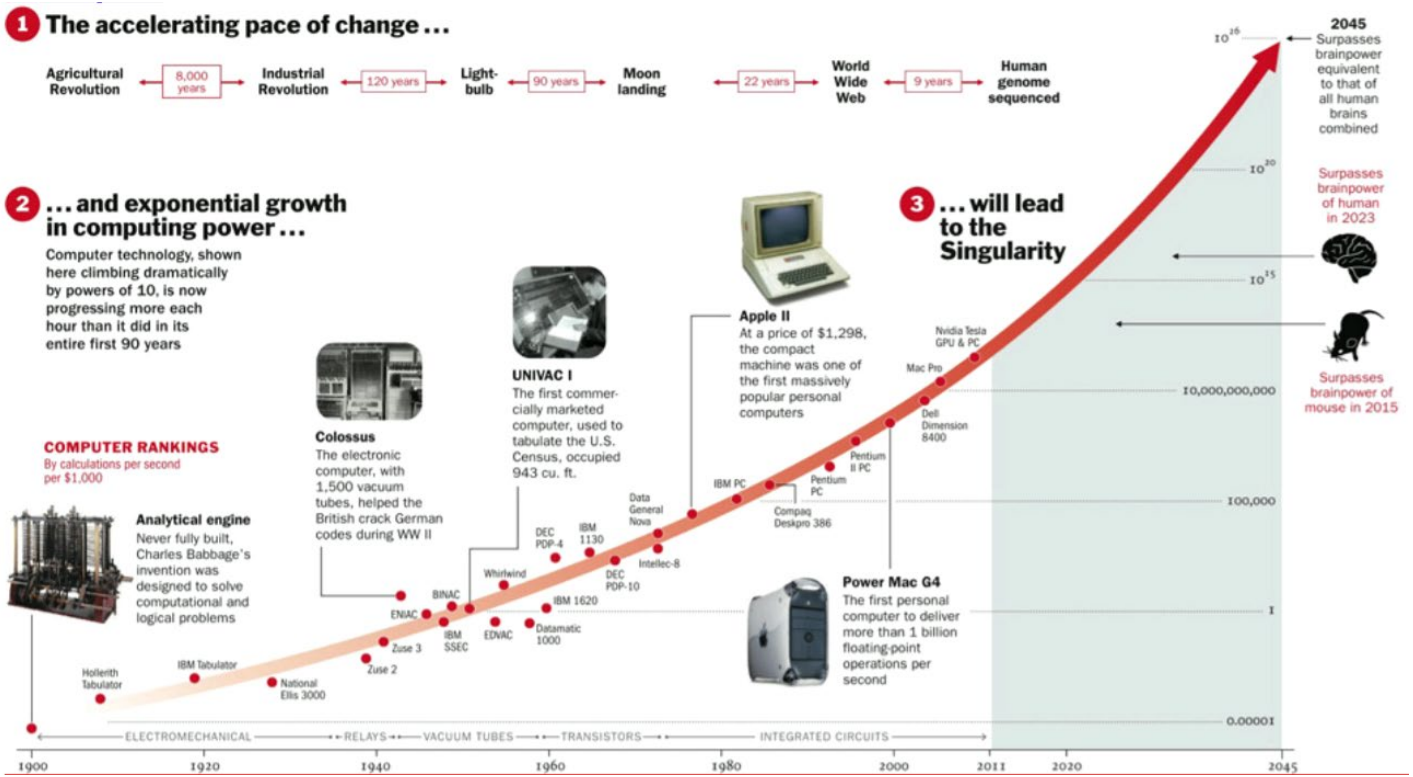
Time Magazine 2011



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Benefits And Impact

- Improve Efficiency
- Improve Accuracy
- Improve Organizational Capabilities
- Improve Employee Satisfaction

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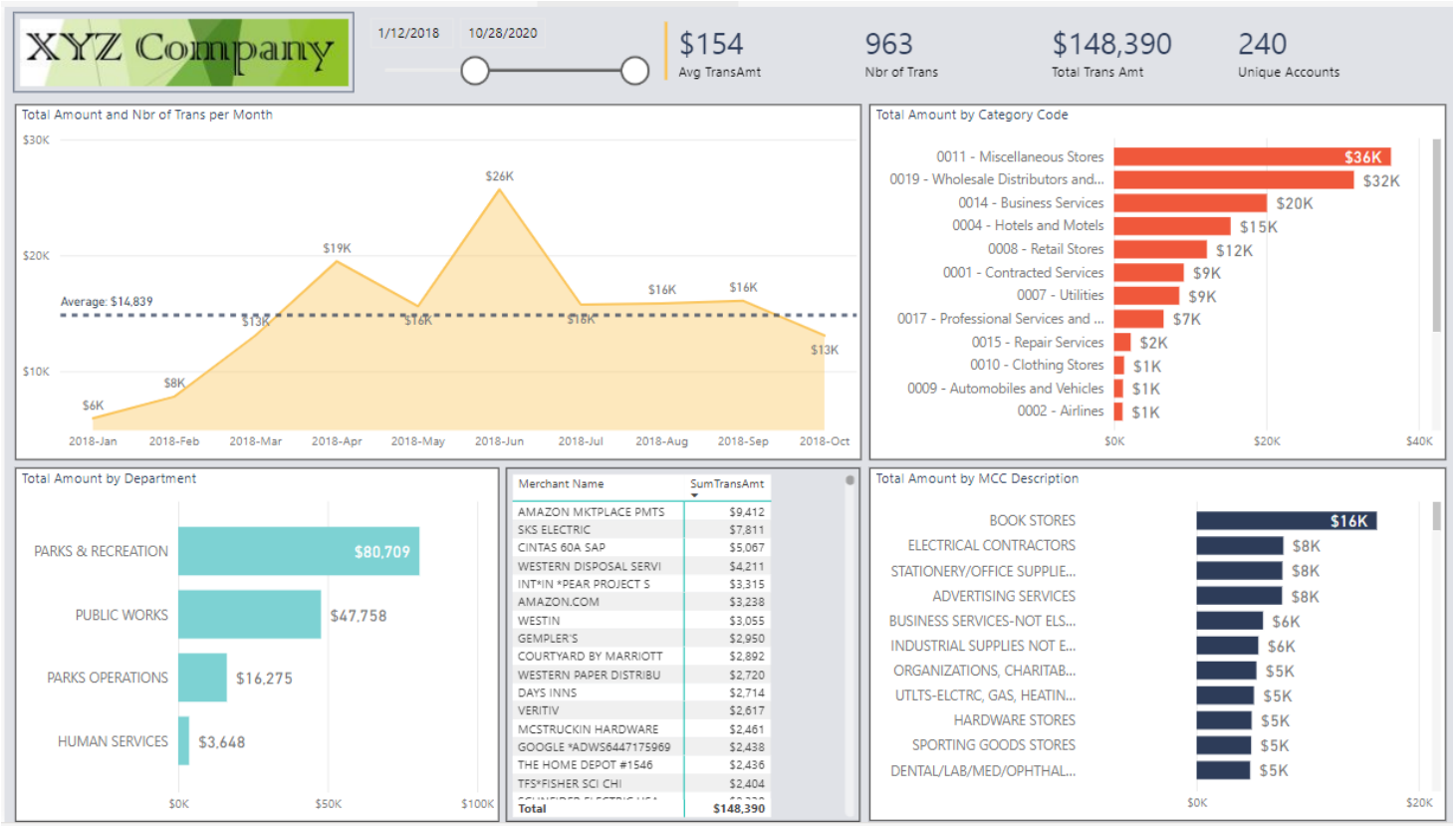

Use Case Study: Business Intelligence Reporting and Automation – P Card Analytics

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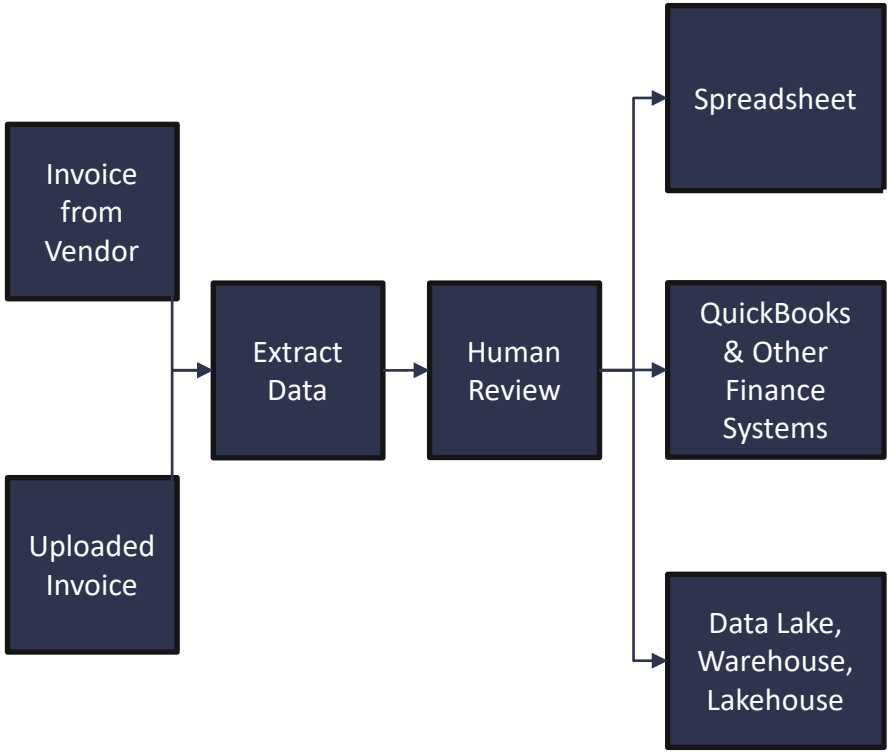
Use Case Study: AP Automation



Reduce manual data entry from documents such as invoices

Minimize error associated with manual processing

Integrate with existing workflow and enterprise systems

Reduction in manual invoice processing time

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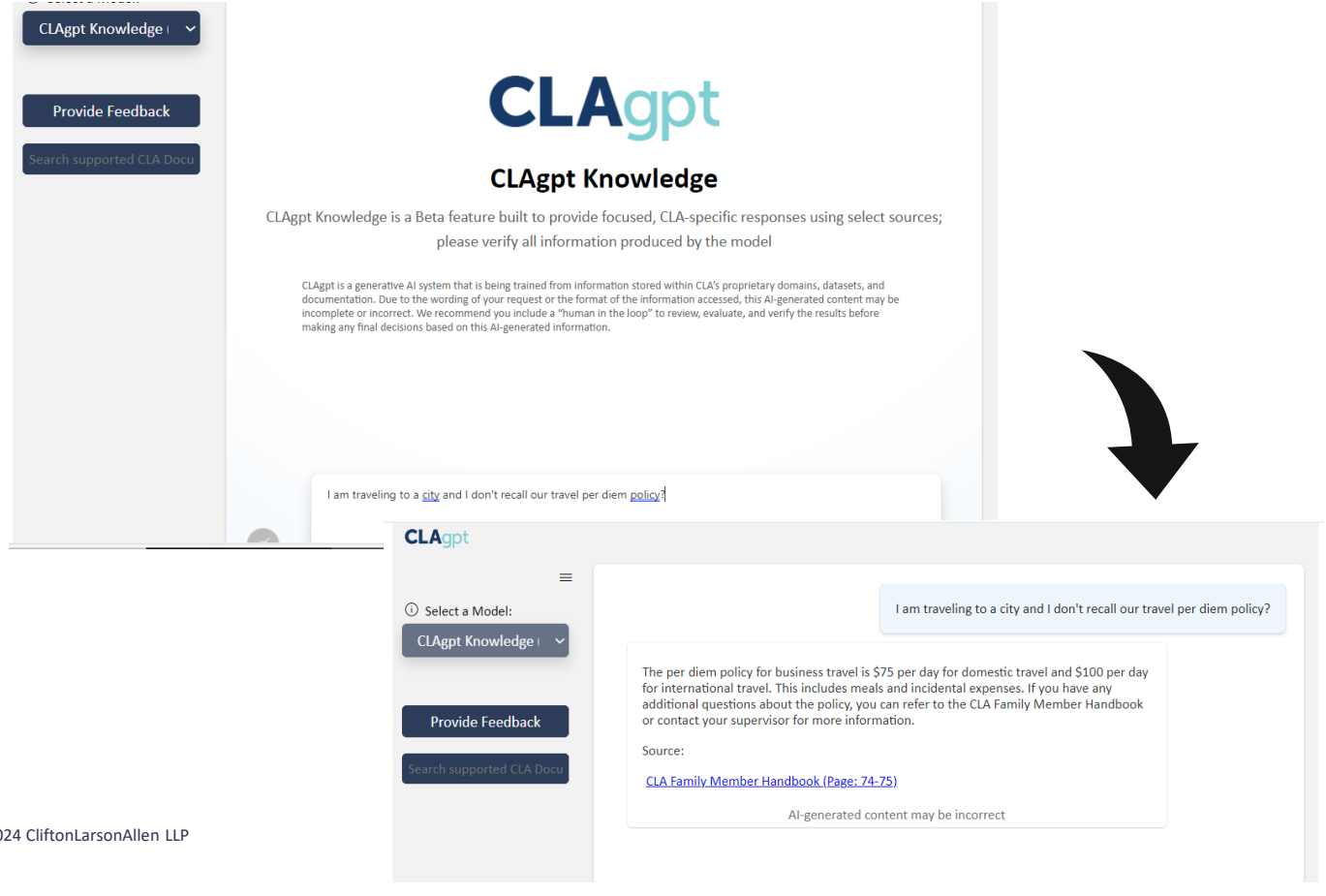
Use Case Study: Large Language Models



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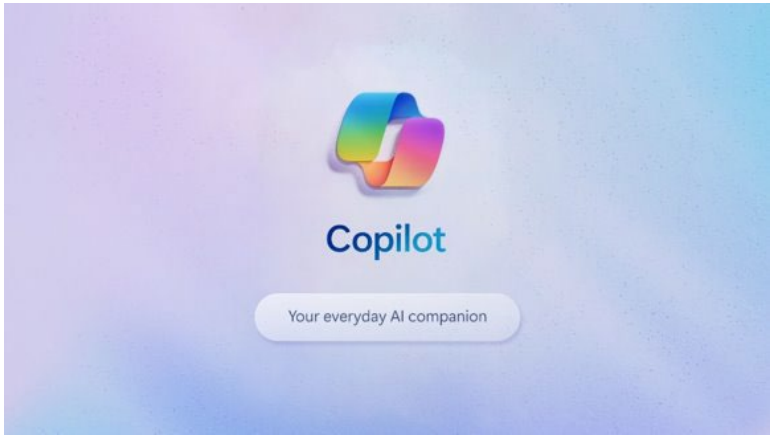
Use Case Study: Microsoft's Copilots

- Windows Copilot
- Microsoft 365 Copilot
- GitHub
- Other copilots
  - Power Platform
  - Microsoft Fabric
  - Azure AI
  - Dynamics 365
  - And more!



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Challenges

- Data accuracy
- Bias
- Security
- Trust but Verify
- Know the source
- Fear of use of available tools

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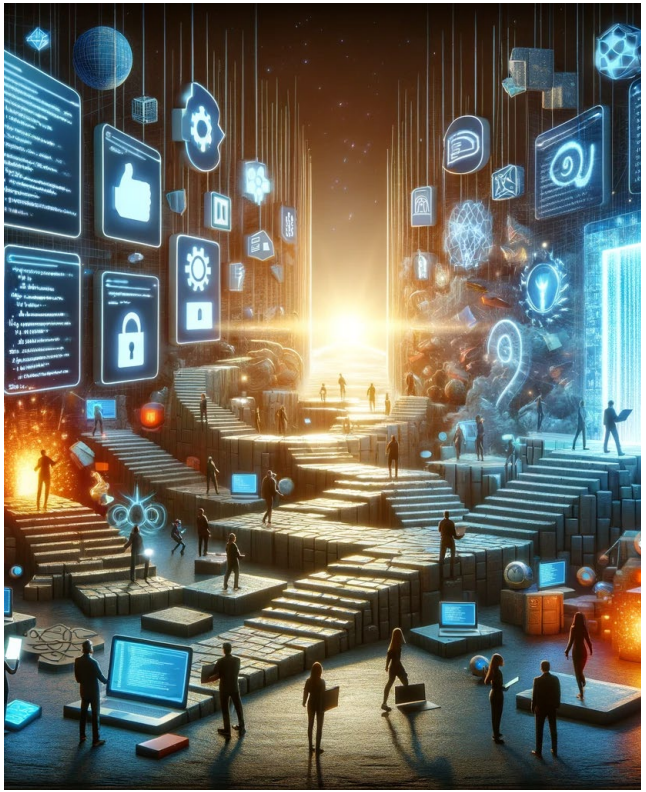
Overcoming Challenges

- Be intentional on how AI can provide the most benefit
- Controls – keep a human in the loop, and trust but verify
- Limited, controlled roll out. Pilot first
- Security of infrastructure
- LLM versus OpenAI



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How To Get There

- Assess current state
- Data readiness
- Develop a roadmap
- Short term and long-term objectives
- Internal working group
- Test the technology
- Educate yourself!

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Future Trends

- It’s not going away
- Speed of growth will continue to expedite
- Controls?
- There will be many models to choose from
- The use cases will become endless

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Question and Answer Session

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Thank You!

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