

# Lowering the Barrier to AI

**@ Future of Good**  
**Brett Tackaberry**

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# Speaker introduction



**Brett  
Tackaberry**

Principal Architect

Google Cloud  
Canada Public Sector

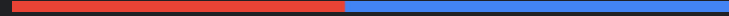
Digital solutions for 20+ years in Ottawa.

CTO at Rebel.com (domain names, hosting, etc)  
Small digital agencies

Might see me at Ottawa Civic Tech, Climate tech, Javascript,  
occasionally Invest Ottawa meetups

Ran Random Hacks of Kindness

# Why?



# 01

## Contents

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What is AI? What does it mean for you?



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Gen AI Studio



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Vertex AI Studio



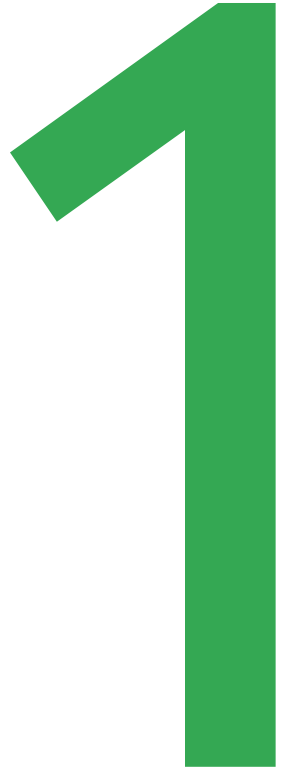
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Agent Builder



# What is AI? What are agents?

## ...why?



# What are large language models?



ML algorithms that can **recognize, predict, and generate** human languages



Pre-trained on petabyte scale text-based datasets resulting in large models with **10s to 100s of billions of parameters**



LLMs are normally **pre-trained on a large corpus of text** followed by fine-tuning on a specific task



LLMs can also be called **Large Models** (includes all types of data modality) and **Generative AI** (a model that produces content)



Go read this huuuuuuge pile of books.



So, you've learned about cats and millions of other concepts ... what's a cat?

A cat is a small, domesticated carnivorous mammal.



**Generative language models**

LaMDA, PaLM, GPT-3, etc.

# Why are large language models different?



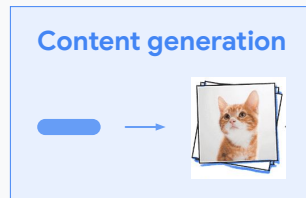
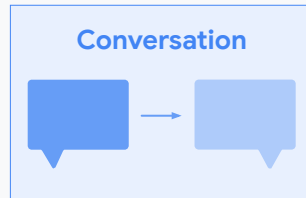
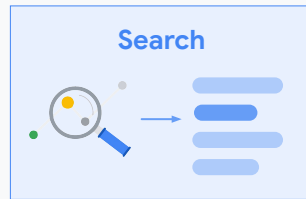
LLMs are characterized by **emergent abilities**, or the ability to perform tasks that were not present in smaller models.



LLMs contextual understanding of human language **changes how we interact** with data and intelligent systems.



LLMs can find patterns and connections in **massive, disparate data corpora**.



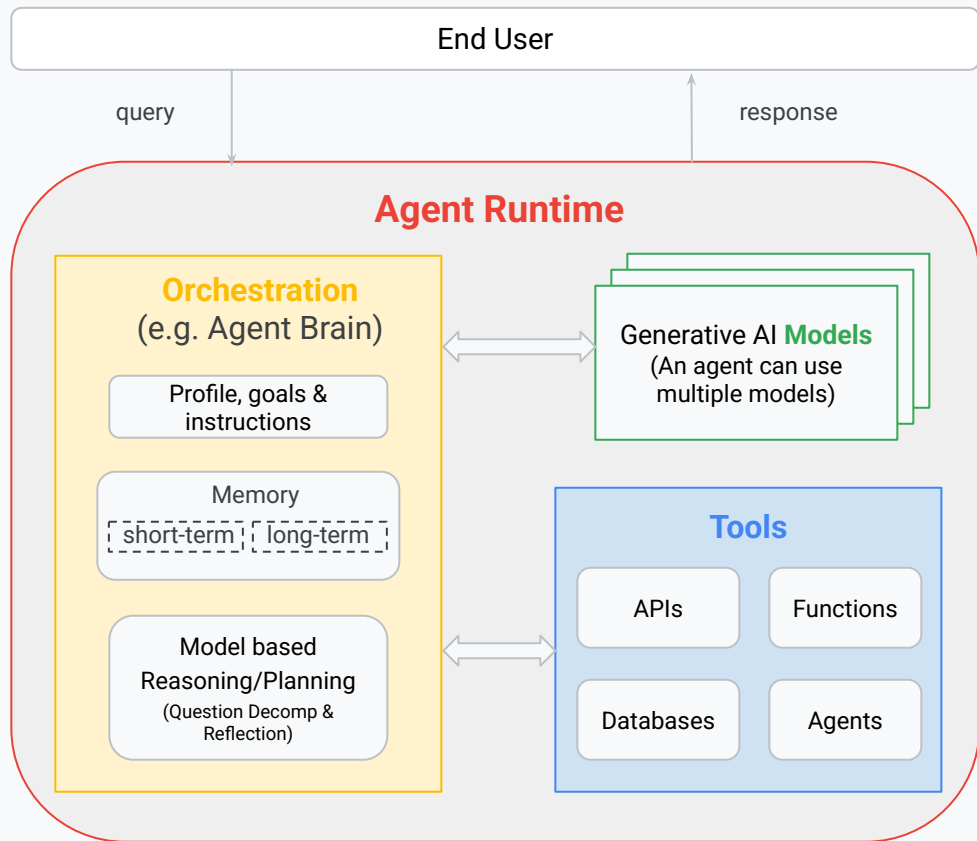
## Observe, Act, Achieve

An AI Agent is an **application** that tries to achieve a **goal** by **observing** the world and **acting** upon it using the **tools** it has at its disposal.





# The Agent Architecture

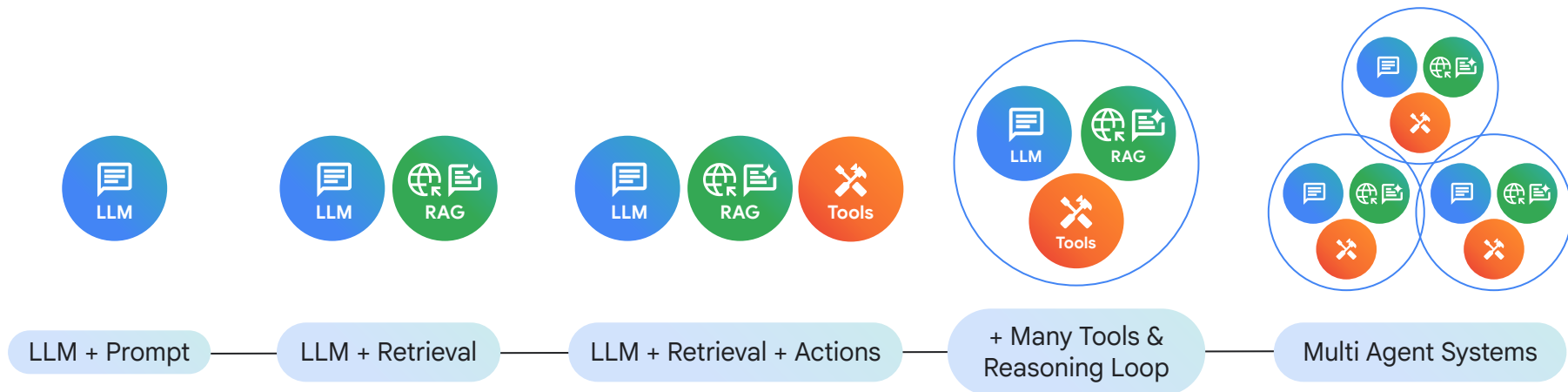


## Four Key Components

- **Model:** Used to reason over goals, determine the plan and generate a response
- **Tools:** Fetch data, perform actions or transactions by calling other APIs or services
- **Orchestration:** Maintain memory and state (including the approach used to plan), tools, data provided/fetched, etc
- **Runtime:** Execute the system when invoked

# AI Agents

## An Evolution



What is next?

Think of it like a very capable  
assistant you can train to handle  
specific, repetitive tasks.



# Stretched Thin

## AI Can Help By:

Automating repetitive tasks like drafting standard emails, summarizing meeting notes, or organizing data.

## Result:

Frees up your valuable time for strategic planning, program delivery, fundraising, and building relationships.

# Need Deeper Engagement, But Lack Time

## AI Can Help By:

Drafting personalized thank you messages for donors, welcoming new volunteers based on their interests, or creating tailored outreach snippets.

## Result:

Enhances connection with your stakeholders at scale, without requiring hours of manual writing for each individual.

# Dealing with Information Overload

## AI Can Help By:

Quickly summarizing long reports, analyzing batches of program feedback for key themes, or extracting essential details from grant applications.

## Result:

Makes information more manageable and helps you gain insights faster for decision-making and reporting.

# Serving a Bilingual Community

## AI Can Help By:

Assisting with drafting or translating simple, routine communications between English and French (always requiring human review!).

## Result:

Improves accessibility and reach within our diverse community.

# Striving for Consistency

## AI Can Help By:

Using predefined prompts to ensure standardized responses or summaries across different team members or volunteers.

## Result:

Maintains consistent messaging and quality in your communications and processes.



# Facing Reporting Demands & Grant Deadlines

## AI Can Help By:

Assisting with drafting sections of reports by summarizing project activities, helping outline grant proposal sections based on requirements, or summarizing background research needed for applications.

## Result:

Speeds up the initial drafting process for reports and grants (always review and refine!), helping you meet deadlines and focus more time on strategic content and funder relationships.

AI isn't about replacing the essential human element of your work.

It's about augmenting your capacity and amplify your impact on your mission

# Using AI Responsibly: Key Considerations

1. Human Oversight is Non-Negotiable
2. Protect Your Data
3. Watch for Potential Bias
4. Understand the Costs
5. Start Small, Learn Fast

# Examples of Bias

- Resource Allocation
- Risk Assessment
- Fundraising and Donor Targeting
- Program Eligibility and Service Matching
- Impact Evaluation
- Geographic and Data Desert
- Volunteer Screening & Matching
- Drafting Grant Proposal Sections or Reports

# What are your use cases?



# Getting Started: Easy Ways to Use AI Today



# Chat Interfaces



What they are: Tools where you have a direct conversation with AI.



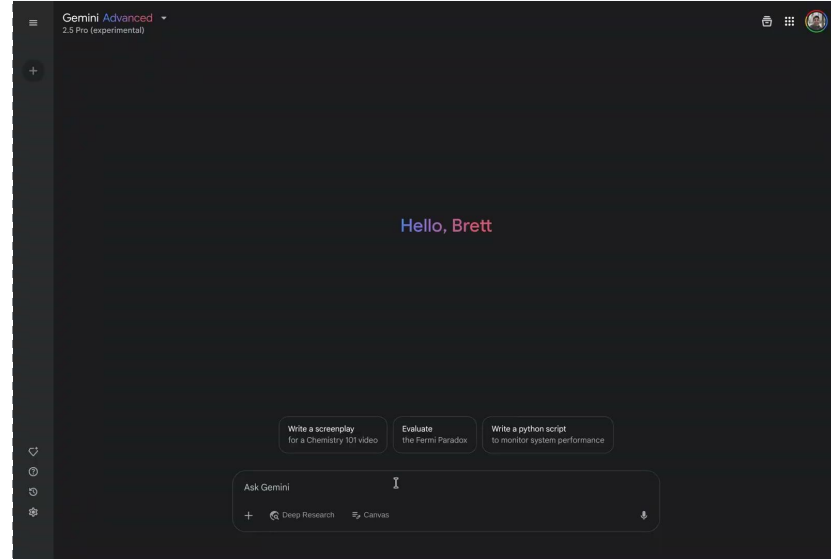
Examples: Gemini, GhatGPT, Claude, Grok



Good for: Brainstorming, drafting text, summarizing, translation, answering questions, explaining



Demo: [Gemini](#), [ChatGPT](#)



# AI for your documents and notes



What they are: AI focused on *your* specific uploaded content.



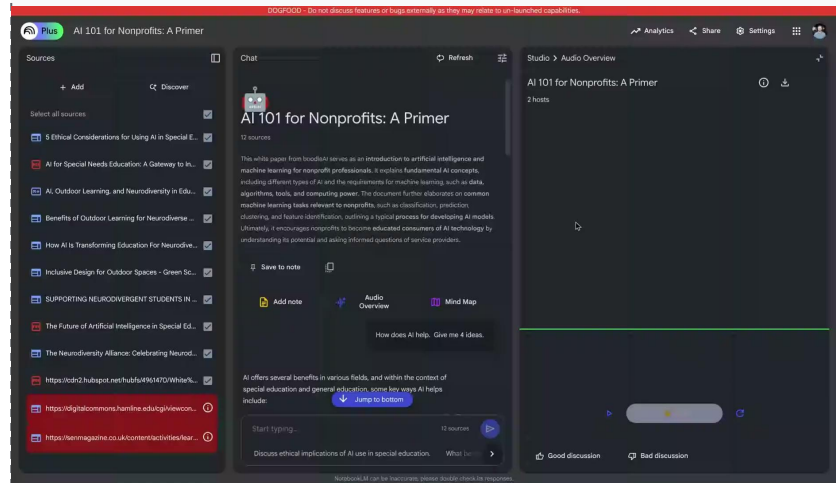
Examples: NotebookLM (from Google)



How it helps: Lets you upload your documents (reports, PDFs, meeting notes, grant guidelines) and then ask questions about that specific content.



Demo: [NotebookLM](#)





# AI Integrated into Your Daily Tools



What they are: AI features built directly into software you likely already use.



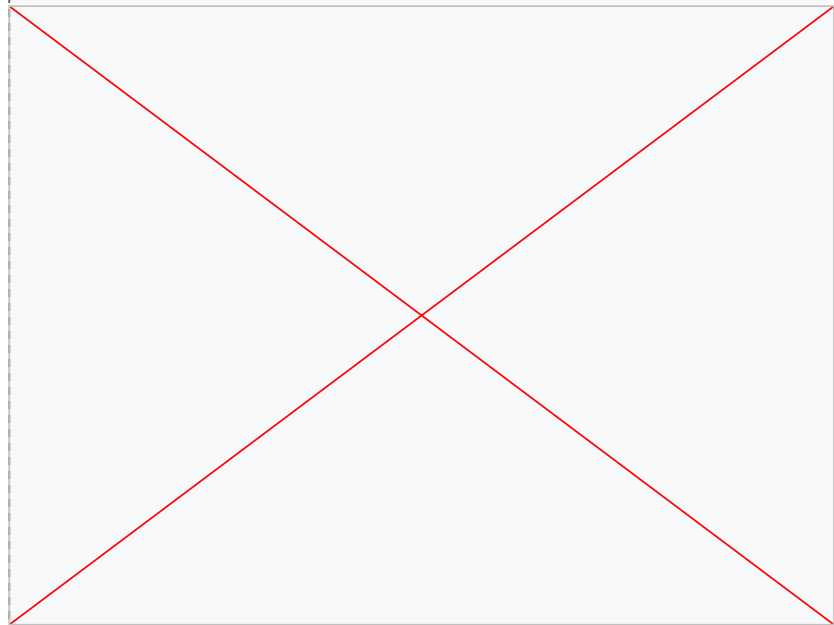
Examples: Gemini in Google Workspace (Docs, Gmail, Sheets), Microsoft Copilot in Microsoft 365 (Word, Outlook, Excel).



How it helps: Provide context-aware assistance within your workflow – drafting emails, summarizing documents, analyzing data, creating presentation outlines.



Demo: New google docs



# Writing effective prompts

The four main areas to consider when writing an effective prompt are:

- Persona
- Task
- Context
- Format

Here is an example of a prompt using all four areas that could work well:

You are a program manager in [industry]. Draft an executive summary email to [persona] based on [details about relevant program docs]. Limit to bullet points.

<https://services.google.com/fh/files/misc/gemini-for-google-workspace-prompting-guide-101.pdf>

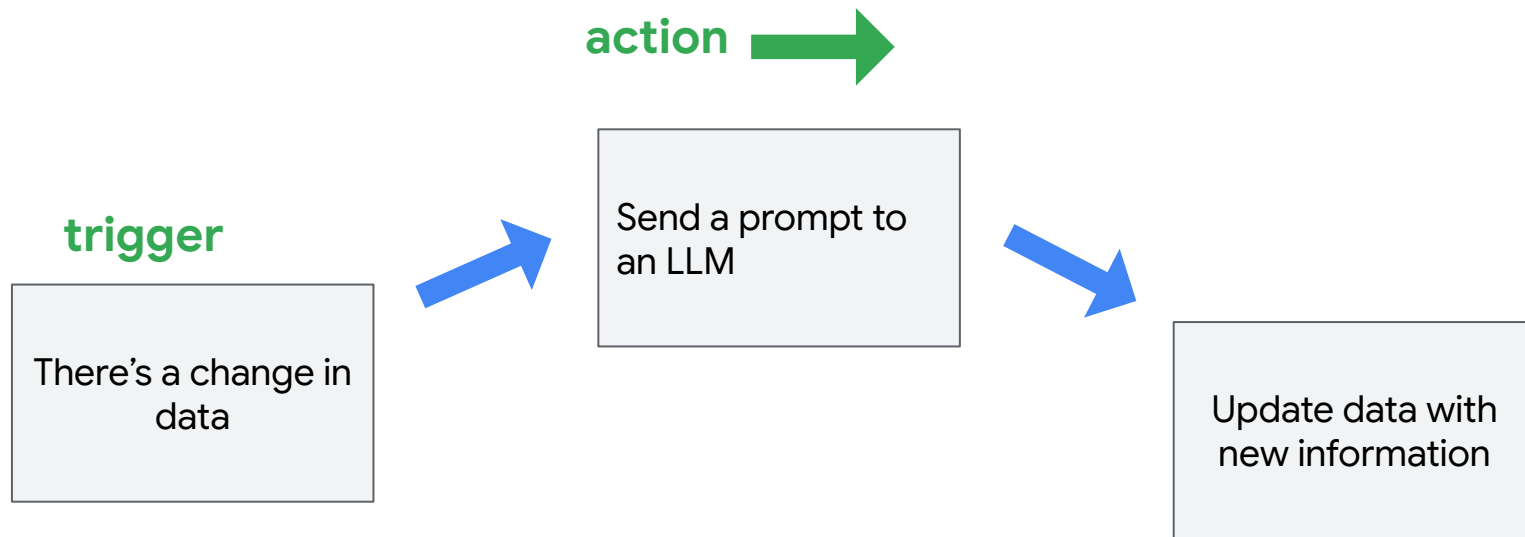
# The Automation Flow



# Use Case Development

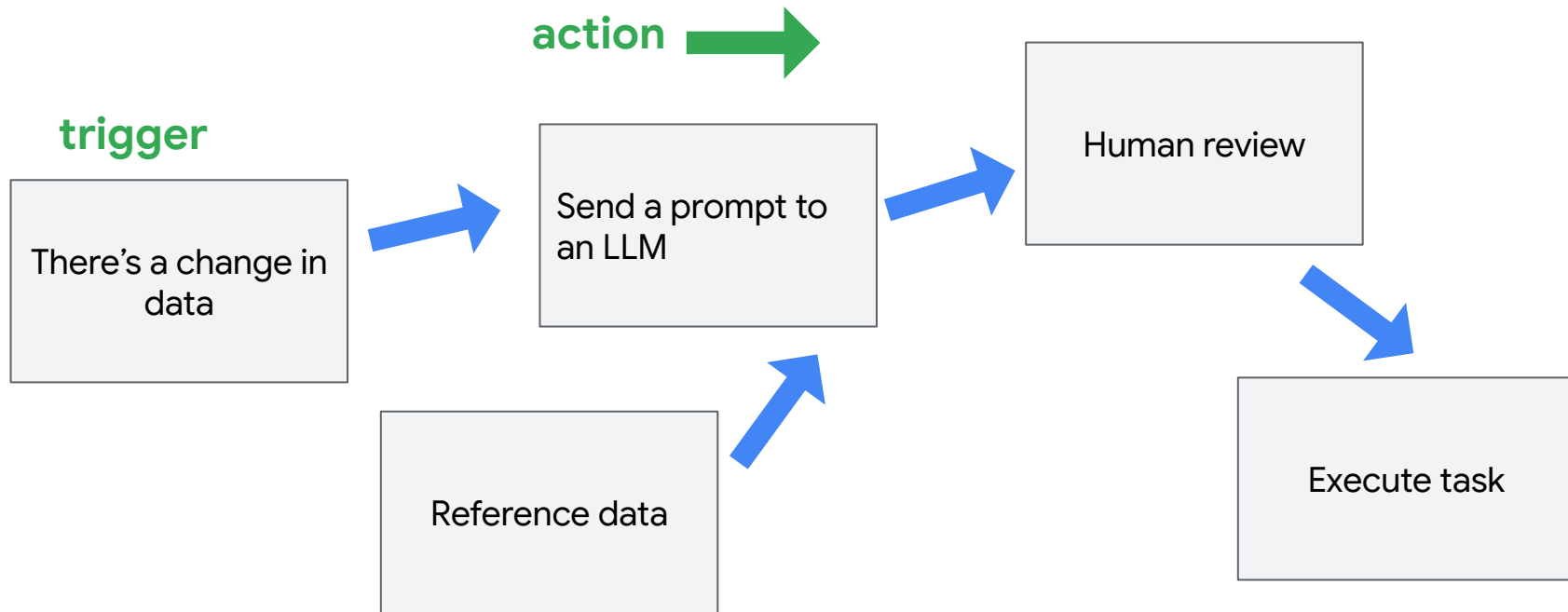
1. Start with problems, not technology
2. Involve your people
3. Follow the data - Identify data-rich areas
4. Look for specific task types
5. Evaluate potential use cases - value vs. feasibility
6. Start small
7. Research, learn from others, share

# Enriching data workflow




**Saves time, ensures consistency, scale efforts**

# Resource Matching Workflow



# Legal Contract Intelligence Agent

- Procurement contracts are typically large, complex documents
- Organizations need to maintain standardized terms and provisions
- GenAI brings efficiencies and reduce review cycle
- [Demo](#)

 **Procurement and Legal Contract Intelligence Agent**

Upload YAML File

[Sample YAML]: RBITCS-lyaml

912.0 B

Submit

Analysis Results

Provision	Summary	Filename	Link	Page Number	Content
Indemnification	The contract includes indemnification language. [1] The contract states that each party agrees to indemnify, defend, and hold the other harmless. [1] The indemnified party must provide written notice to the indemnifying party of any claim within 30 days of becoming aware of it. [1] The indemnified party must also permit the indemnifying party to assume full responsibility for investigating, preparing for, and defending against any claim. [1] The indemnified party must assist the indemnifying party in the investigation, preparation, and	[Sample Testing Doc] - Apollo Endosurgery - Manufacturing and Supply Agreement	<a href="https://storage.cloud.google.com/future-backoffice-procurement/Sample_Testing_Doc_-_Apollo_Endosurgery_-_Manufacturing_and_Supply_Agreement.pdf#page=11">https://storage.cloud.google.com/future-backoffice-procurement/Sample_Testing_Doc_-_Apollo_Endosurgery_-_Manufacturing_and_Supply_Agreement.pdf#page=11</a>	11	such claim, demand or action; (ii) permitting the indemnifying Party to assume full responsibility to investigate, prepare for and defend against any such claim or demand; (iii) assisting the indemnifying Party, at the indemnifying Party's reasonable expense, in the investigation of, preparation for and defense of any such claim or demand; and (iv) not compromising or settling such claim or demand without the indemnifying Party's written consent; provided, however, that the failure of the indemnified Party to undertake any of the foregoing actions shall not relieve the indemnifying Party of any obligation it may have under

# Contract Provisions

- provision: Indemnification  
question: Check if the indemnification related language is included in this contract?
- provision: Restaurant Brands International personal data  
question: Check if the Google requested including or not including any personal data?
- provision: Governing Law and Venue  
question: Check if the governing law and venue related language is included in this contract?
- provision: Term of the Agreement  
question: Check if the term of the agreement in this contract is more than 2 years?
- provision: Termination  
question: Check a termination language is included?
- provision: Quality Control  
question: Check if the "quality control" related language is included in this contract?



# How does this get built

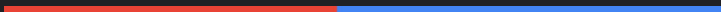
- CRM like Salesforce and HubSpot will have AI and automation built-in
- Microsoft has Power Automate with Copilot
- Email marketing has had automations built-in for a long time
- Accounting Software now includes AI for receipt scanning, categorization, or anomaly detection
- Scripting and writing software - Google apps script and python

# Identify the problem first

Regardless of the tool, the real starting point is identifying a specific, repetitive, time-consuming task or bottleneck in your workflow. Clearly mapping out the manual steps involved is essential before you can effectively automate it.

- What information is needed?
- What decisions are made?
- What is the desired outcome?

# What do YOU want to talk about?

- Search and agents  
(internal knowledge mgmt)
  - Extracting information from forms (pdfs, images, handwriting)
  - Transcribing video or audio
  - Translation and languages
  - Coding
- 

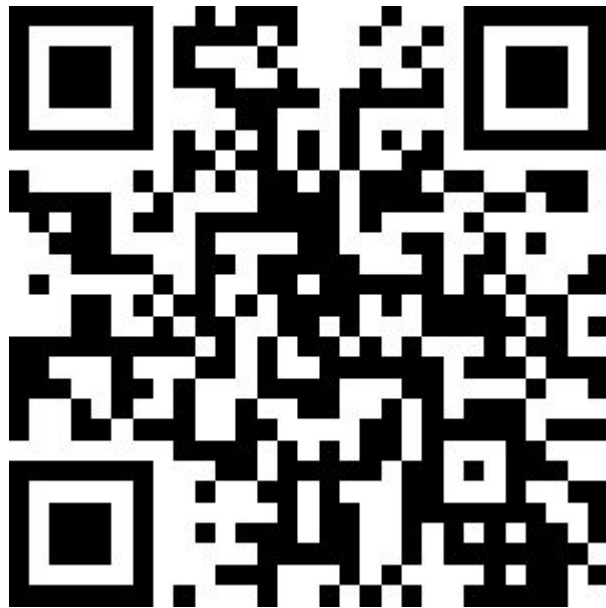
# Take Away

- Prioritize and elevate security - understand risks
- Start small and learn quickly
- Start with problems, not technology - Focus on why
- Communicate and share - leverage existing resources
- Enterprise platforms will help manage and protect data, built-in security, ability to build and deploy apps,

# Thank you

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<https://www.linkedin.com/in/tackaberry/>