

Embracing AI in the Finance Office

Leveraging the technology to help you leave the
office on time

Today's Speakers



Stuart Langer, CPA

SVP Product Strategy for
OpenGov Financials

Stuart M Langer, CPA, MBA, is a seasoned executive with extensive experience in product strategy and management, financial applications, and professional services. As the Senior Vice-President of Product Strategy at OpenGov, he currently leads the overall product strategy, ensuring effective collaboration across various teams.

Stuart has been an early adopter of both generative and machine learning based solutions for years including leading the effort to bring AI to private sector ERP products, being a patent applicant for “Continuous Anomaly Detection Using Machine Learning”, and led the development and release of Sage Intelligent Time.

In addition to being a builder of financial solutions, he has also been an auditor, contract CFO and consultant in both public and private sector having worked with hundreds of organizations to deploy and optimize financial and operational systems and processes.

Stuart holds an MBA with a concentration in Accounting from Georgia State University's J. Mack Robinson School of Business and is a Certified Public Accountant in Georgia since 1986. Additionally, he has been an Adjunct Professor of Accounting at Oglethorpe University, Atlanta GA.

Agenda

- Introduction
- What is AI? Generative AI vs Machine Learning
- How You Can Use AI in the Finance Office
- Not all AI is Created Equal
- Prompt Best Practices for Getting the Best Results
- Excel Macro Creation Using Generative AI
- Q&A

Poll # 1

Poll # 1: How much is your organization currently using AI?

- Not much
- Individuals are using it but the use isn't organized or part of a larger plan
- Departments are using it but the use is just for a few very specific purposes
- Departments are using it in an organized, strategic manner
- Our entire organization is using it in an organized, strategic manner

The Dos and Don'ts of Using AI in the Public Sector

AI has the potential to revolutionize the way the public sector operates, serves its missions, and supports its citizens.

Karen Dahut, CEO of Google Public Sector

What is Generative AI



**Predictive
AI**

VS



**Machine
Learning**

VS



**Generative
AI**

What is Generative AI

Predictive AI

The use of machine learning to identify patterns in past events and make predictions about future events. It does not use human judgment, which leads to far less error and often outperforms data scientists.

Machine Learning

A subset of AI that enables machines or systems to learn and improve from experience. Instead of explicit programming, ML uses algorithms to analyze large amounts of data, learn from insights, and make informed decisions.

Generative AI

A specialized branch of ML that focuses on creating new data, such as images, text, or even music, based on patterns and knowledge learned from existing information

How You Can Use Gen AI in the Finance Office?



Copywriting



Brainstorming
& ideation



Data analysis



Productivity
hacks



As a search
engine



Generating
Excel Macros

Not All AI is Created Equal



Data Hallucinations

Certain generative AI systems like ChatGPT can generate information that seems plausible, but is not based on real data.



Privacy Concerns

If you're using a free AI account, all the data you provide belongs to the company that made the tool you're using.

AI Created for the Public Sector

Keep Your Data Safe

Pick systems that don't add your data to public models

Be Able to Verify Results

Be able to document the sources of your outputs so that you can verify important outputs

Opt in to Faster Workflows

Use AI when you want, but don't be forced into using it if you don't want to

Prompt Best Practices for Getting the Best Results

Use the RELIC formula to guide your prompt writing.

R—Role



You are an assistant city manager with over 20 years of experience . . .

E—Exclusion



Do not include . . .

L—Length



Keep your writing between 300 and 400 words . . .

I—Inspiration



Use this article as a reference for style, tone, and voice:
[LINK] (or [PASTE TEXT] if not using GPT4 with Bing).

C—Context



You work for the City of Bard and you've been tasked with creating a plan for a multicultural day . . .

Poll #2

Poll # 2: How would you describe your feelings about the use of AI in the public sector?

- Worried
- Excited
- Cautiously optimistic
- This is the end of humanity as we know it
- A mix of all of these

Excel Macro Creation

Scenario: Let's say you frequently receive customer feedback in the form of text comments, and you need to categorize these comments into different categories (e.g., positive, neutral, negative) for analysis. You want to create an Excel macro that uses ChatGPT to automatically categorize these comments based on their sentiment.

Steps:

1. Set up your Excel spreadsheet:

- Create a column for the customer comments.
- Create another column where the categorized sentiment will be displayed.

2. Write your VBA code:

- In Excel, navigate to the Developer tab and click on "Visual Basic" to open the VBA editor.
- Write a VBA macro that loops through each comment in the spreadsheet and uses ChatGPT to determine its sentiment.
- You can use the Excel-DNA library to integrate ChatGPT into your VBA code. Here's a simple example of how you might structure your code:

Generated Code

```
vba Copy code
Sub CategorizeSentiment()
    Dim rngComments As Range
    Dim cell As Range
    Dim response As String

    ' Specify the range of cells containing the comments
    Set rngComments = Worksheets("Sheet1").Range("A2:A" & Cells.Rows.Count, 1).End(xl

    ' Loop through each comment and categorize its sentiment
    For Each cell In rngComments
        ' Call ChatGPT to analyze the comment
        response = ChatGPT_AnalyzeSentiment(cell.Value)

        ' Categorize the comment based on the response from ChatGPT
        If InStr(response, "positive") > 0 Then
            cell.Offset(0, 1).Value = "Positive"
        ElseIf InStr(response, "negative") > 0 Then
            cell.Offset(0, 1).Value = "Negative"
        Else
            cell.Offset(0, 1).Value = "Neutral"
        End If
    Next cell
End Sub
```

1. Integrate ChatGPT:

- Implement the `ChatGPT_AnalyzeSentiment` function to call the ChatGPT API and analyze the sentiment of each comment.
- You can use the `HTTP` object in VBA to send requests to the ChatGPT API and process the responses.

2. Run your macro:

- Save your VBA code and close the editor.
- Back in Excel, run your macro by clicking on "Macros" in the Developer tab and selecting your macro.

This example demonstrates how you can leverage ChatGPT within Excel to automate a data analysis task, providing intelligent assistance in categorizing customer feedback based on sentiment.



[JOA Article and video](#) (AICPA)



Excel Macro - Sample 2

use chatgpt to create an excel analysis of budget versus actual in financial reporting

ChatGPT

Certainly! Here's how you can use ChatGPT to create an Excel analysis of budget versus actual in financial reporting:

Scenario: You want to analyze the variance between the budgeted and actual expenses for a project. You have the budgeted amounts and the actual expenses recorded in an Excel spreadsheet, and you want to create a report that highlights the differences between the two.

Steps:

Set up your Excel spreadsheet:

- Create a worksheet with columns for different expense categories (e.g., salaries, supplies, marketing, etc.).
- In the first row, enter the names of the expense categories.
- In the second row, enter the budgeted amounts for each expense category.
- In the third row and below, enter the actual expenses incurred for each category.

Write your VBA code:

- In the VBA editor, write a macro that calculates the variance between the budgeted and actual expenses for each category and highlights any significant differences. Here's a simplified version of what the code might look like:

```
vba Copy code
Sub CalculateBudgetVsActual()
    Dim ws As Worksheet
    Dim lastRow As Long
    Dim budgetRange As Range
    Dim actualRange As Range
    Dim varianceRange As Range
    Dim cell As Range

    ' Set reference to the active worksheet
    Set ws = ActiveSheet

    ' Find the last row of data
    lastRow = ws.Cells(ws.Rows.Count, 1).End(xlUp).Row

    ' Set ranges for budgeted and actual expenses
    Set budgetRange = ws.Range("B2", "B" & lastRow)
    Set actualRange = ws.Range("C2", "C" & lastRow)

    ' Calculate variances and highlight significant differences
    For Each cell In budgetRange
        ' Calculate variance
        Set varianceRange = ws.Cells(cell.Row, "D")
        varianceRange.Value = cell.Value - ws.Cells(cell.Row, "C").Value

        ' Highlight significant differences (e.g., variations exceeding a certain threshold)
        If Abs(varianceRange.Value) > 1000 Then
            varianceRange.Interior.Color = RGB(255, 0, 0) ' Highlight in red
        End If
    Next cell
End Sub
```

1. Run your macro:

- Save your VBA code and close the editor.
- Back in Excel, run your macro by clicking on "Macros" in the Developer tab and selecting your macro.

This example demonstrates how you can leverage ChatGPT to create an Excel analysis of budget versus actual expenses. The macro calculates the variance between the budgeted and actual expenses for each category and highlights any significant differences, allowing you to quickly identify areas where expenses deviate from the budget.



Poll #3

Poll #3: Does your organization have an AI policy in place?

- Yes
- No
- We're currently developing one
- We don't plan to make one
- We have put the use of AI on hold while we create one

Looking Forward



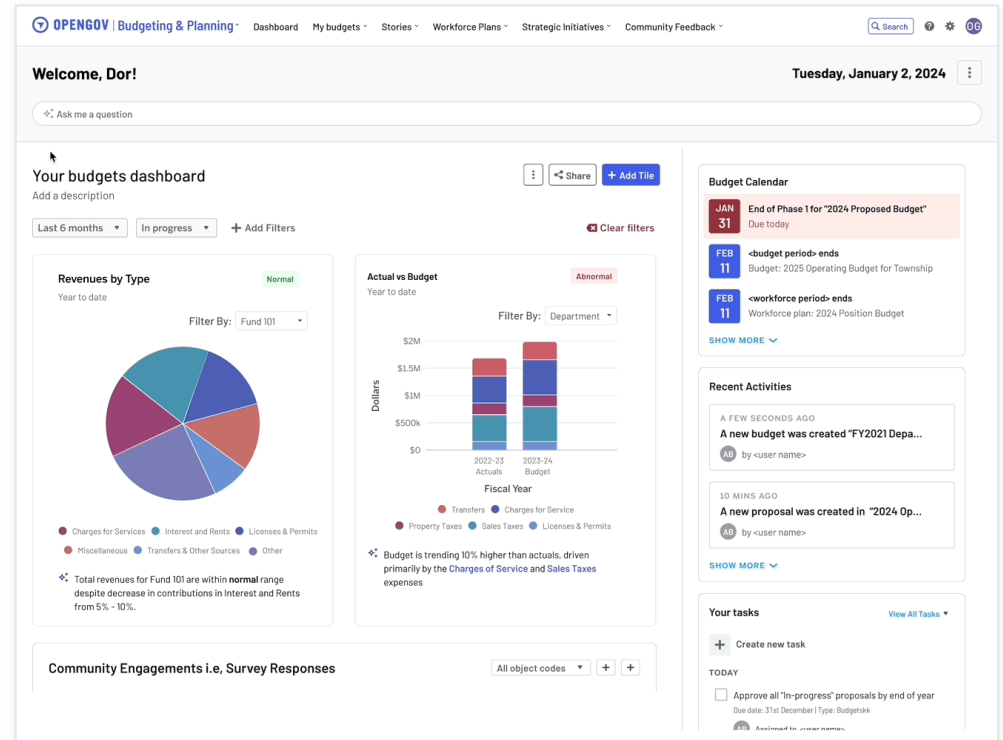
“I don’t foresee a future where we’re building our own tools that leverage AI. Instead, I imagine that vendors will be our primary avenue for incorporating AI into our work.”

What's Next for AI at OpenGov

OpenGov Cloud: Simplified Help and Search Access

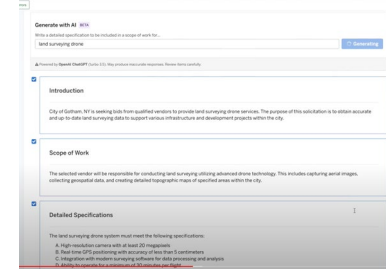
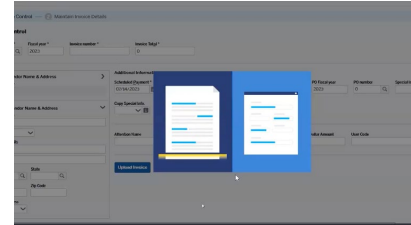
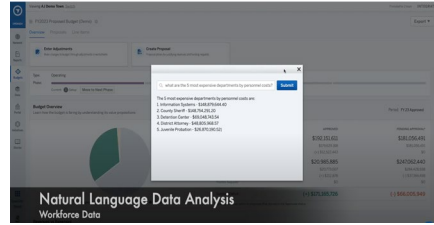
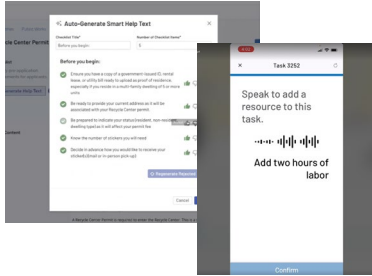
Introduce advanced search and help capabilities across all suites.

- **Search:** AI-assisted search to help users find what they need quickly
- **Integrated resource center,** chat, and support brings help to users right from the suites.



AI Product Evolution

Early Prototypes currently enroute to shipping product



Permitting & EAM

- ✓ Dynamic applicant guide (PLC)
- ✓ Field Worker voice assistant (EAM)
- ✓ Asset and Task search and navigation (EAM)
- ✓ NLP search and filters (EAM)

Budgeting & Planning

- ✓ Global Search and Intelligent Assistant
- ✓ Auto generation of stories and budget books
- ✓ Auto-Narratives from tables, charts and graphs
- ✓ Synthesis of Community Feedback.

Financials

- ✓ Smarts can for Invoice Entry and Validation (HI)
- ✓ Application Navigation (HI)
- ✓ NLP for Flexible Inquiries (HI)

Procurement

- ✓ Automatic categorization of goods and services
- ✓ Automated supplier discovery
- ✓ Auto Generation of Purchasing Specifications and Statements of Work

Questions?