

Getting Real Value from AI: Prompting Clinic

A Briefing For SMACNA Members


Feb. 18th, 2024

Agenda

- How Generative AI works
- What's a Prompt?
- Shifting Our Mindset
- Prompting for Answers
- Prompting to Operate Software
- Prompting to Help Thinking
- Prompting Clinic

Generative AI is a Completion Machine

- Trained on millions of sentences
- They mask part
- It predicts what's missing

She sells seashells by the 

She sells  by the seashore

She  seashells by the seashore

What is Being Completed?

- The less information you give the AI, the wider the possibilities
- The less likely it will give you what you want
- The more information you give the AI, the closer it will be to what you want.

She sells What?
Where?

She sells seashells Where?
When?

She sells seashells by

Search vs. Prompt

- Searching is using a keyword to pull in possibilities.
 - It is not completing a sentence, it is finding similarities.
 - You don't get an answer, you get *options*.
- GenAI is creating something new.
 - It is taking what you have and creating the best next word, or sentence, or paragraph
 - You don't get options, you get a *single drafted answer*

Definition of a Prompt

A prompt is text, graphics and examples that provide the stem, the starting point, that gives GenAI the best chance of creating the answer you want.

GenAI Will Complete *Anything*

- What if you asked ChatGPT how to prompt ChatGPT?
- What if you asked ChatGPT how a customer would react to an email?
- What if you asked ChatGPT how to write an Excel formula?

The Real Mindshift

- We keep hearing about AI as 'intelligence'
- That's the wrong focus.
- **GenAI helps to automate *mental effort*.**

Mental Effort

- **I hate doing accounting**

- “ChatGPT, please read all these receipts and log them into a spreadsheet”

- **I get stuck when I have to write sales emails**

- “Canvas, please write 3 versions of a sales email for my product, aimed at project managers. Use the attached example for details”

- **I forget how to use software**

- “ChatGPT, how do I connect to Zapier? “

Three Roles AI Can Play

1. Finding Answers – search on steroids
 1. Most “co-pilots” do this
2. Operating software – user interface on steroids
 1. AI Isn't The Software You Use.
AI Operates The Software You Use.
3. Providing Thinking – Autocomplete on *lots* of steroids
 1. Assessing emails, presentations
 2. Drafting emails, presentations
 3. General planning, outlining, etc

Prompting for Answers

Pattern #1: RICCE

- **Role** – who is the answer for
- **Instruction** – what do you want answered
- **Context** – what industry, problem, situation
- **Constraint** – short, long, simple, complex answer
- **Example** – any example of where the answer goes, or past answers

RICCE Example

Role: “Writing as a foreman at an HVAC contractor,

Instruction: “read the uploaded document and tell me all of the standards you find.”

Context: “standards should be related to Aluminum sheet metal”

Constraints: “put them in a bulleted list”

Example: Like the list I’ve uploaded as “list.pdf”

Pattern #2: AI Prompt Writer

- Ask AI to write a prompt for you
- “Please write a prompt for an analysis of uploaded documents that includes the following:
 - Role – this is a senior HVAC engineer
 - Instruction – looking to analyze uploaded documents
 - Context – for a 2 year project
 - Constraint – that uses correct technical terms
 - Example – that references uploaded examples”

Pattern #3: Socratic AI

- Get AI to ask you questions until it has the answers it needs.
- Be sure not to give it too much upfront, or it'll just give you an answer.

This means you don't have to think about all of the context upfront.

Try this with voice!

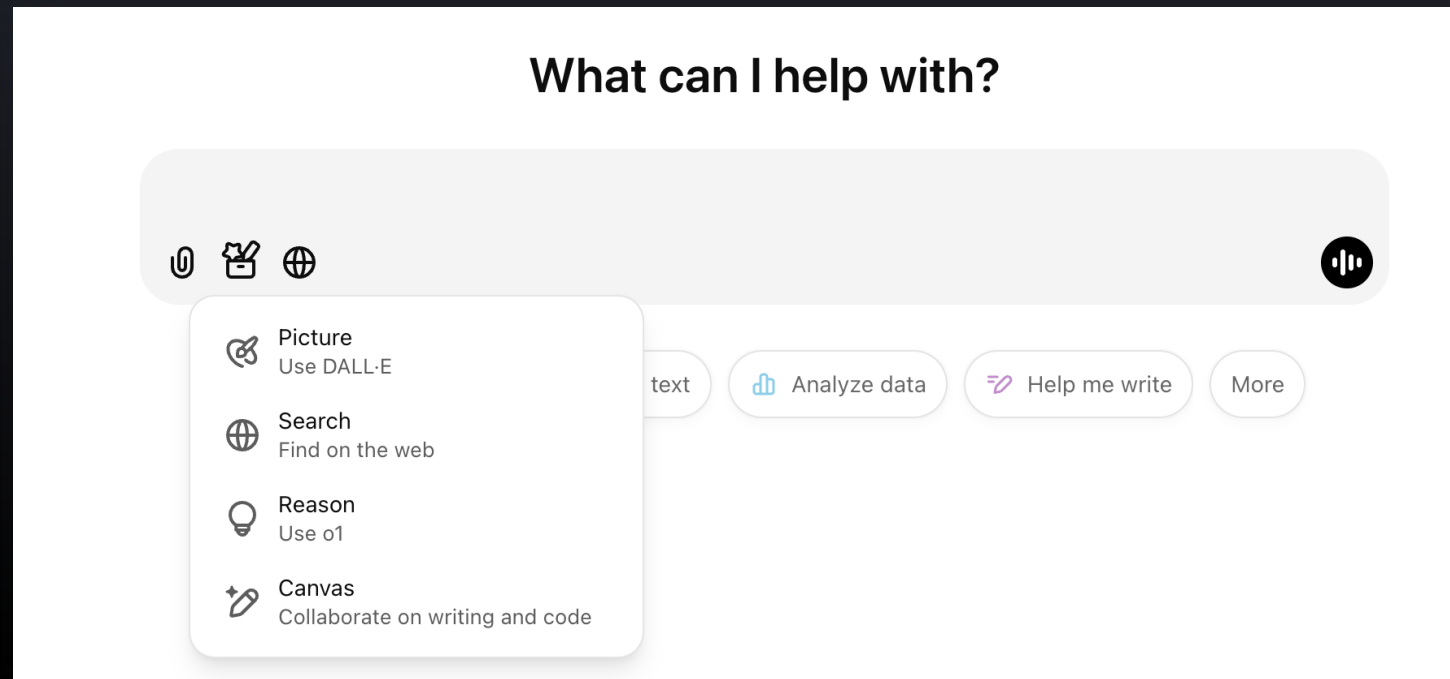
Meeting Agenda

- Example:
- “I need to create a meeting agenda. Ask me all the questions you need to do this. Ask them one at a time, incorporating my answers as you go”

Prompting to Operate Software

Start with ChatGPT Plus

- They built a bunch of software functions into the platform
- Adding to it all the time



ChatGPT Can Write Code



Analysis

python

```
from PIL import Image
```

Always show details

Copy

```
# Open the uploaded image
```

```
image_path = "/mnt/data/IMG_0598.jpeg"
```

```
img = Image.open(image_path)
```

```
# Resize the image to 1200 px wide while maintaining the aspect ratio
```

```
width = 1200
```

```
aspect_ratio = width / img.width
```

```
height = int(img.height * aspect_ratio)
```

```
resized_img = img.resize((width, height))
```

```
# Convert the image to black & white (grayscale)
```

```
bw_img = resized_img.convert("L")
```

```
# Save the processed image
```

```
output_path = "/mnt/data/IMG_0598_resized_bw.jpeg"
```

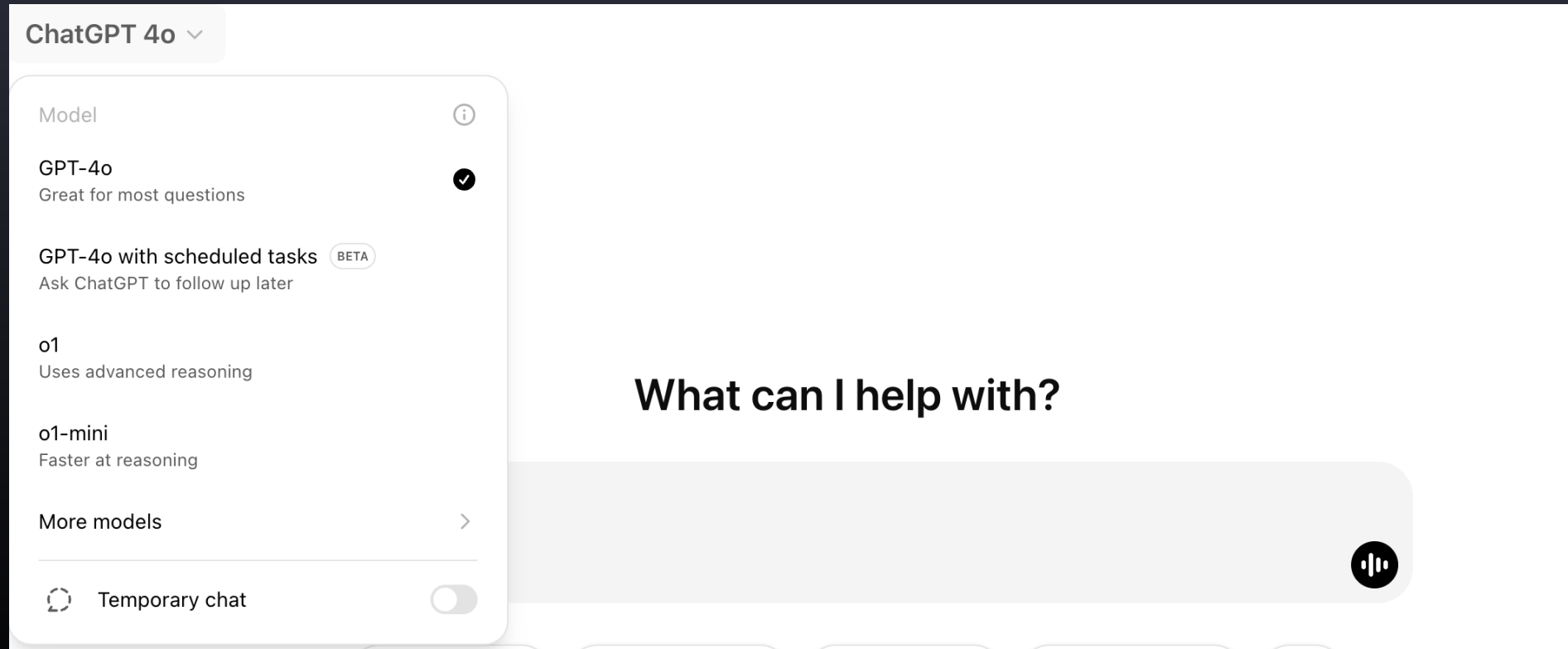


Manage Files of Many Types

- Crop, Resize, recolor this image
- Summarize a table
- Create a GIF of a video
- Upload expenses and pull into a table
- Endless list...



ChatGPT can Operate over Time



ChatGPT Can Answer Software Questions

can you search for API integration platforms that work with Procore?



Procore offers an open API that allows for seamless integration with various platforms, enabling you to expand your account's functionality through new applications and customized connections.

PROCORE

To explore existing integrations, you can visit the Procore App Marketplace, which features a wide range of applications developed by technology partners using the Procore API. [DEVELOPERS.PROCORE.COM](#)

If you're interested in developing custom integrations, Procore provides comprehensive developer resources, including documentation and support, to assist in building applications that integrate with their platform. [DEVELOPERS.PROCORE.COM](#)

Additionally, platforms like Pipedream enable developers to integrate the Procore API with over 2,400 other applications efficiently. [PIPEDREAM](#)

By leveraging these resources, you can effectively integrate Procore with other tools and systems to enhance your construction management processes.

Sources  



can you help with how I might create a workflow in pipedream that does the following:


1. access a table in google sheets, called table #1
2. access change orders via Procore's API, and create a second table in google sheets
3. have chat GPT go line by line in the google sheets table to compare the content against the Procore change order table
4. identify all changes to table #1 that the change order table requires

to create a workflow in Pipedream that accomplishes your objectives, you can follow these steps:

1. Access Table #1 in Google Sheets:

- **Trigger:** Set up a trigger in Pipedream that activates when a new row is added or an existing row is updated in Table #1 of your Google Sheets.
- **Action:** Use Pipedream's Google Sheets integration to read the data from Table #1.

2. Retrieve Change Orders via Procore's API and Create a Second Table in Google Sheets:

- **Action:** Utilize Pipedream's Procore  integration to fetch change orders from Procore's API

Excel Example

The screenshot shows a ChatGPT interface with a user prompt and a response. The user prompt, highlighted with a red box, asks for a summary of a spreadsheet and the average sales per month. The response provides a list of monthly sales figures and an average sales per month value.

User Prompt: Please summarize this spreadsheet, and tell me my average sales per month

Response:

Total sales per month:

- January: \$110,000.00
- February: \$45,000.00
- March: \$55,000.00
- April: \$75,000.00
- May: \$150,000.00
- June: \$165,000.00
- July: \$80,000.00
- August: \$80,000.00
- September: \$110,000.00
- October: \$125,000.00
- November: \$120,000.00
- December: \$90,000.00
- January: \$150,000.00
- February: \$145,000.00

Average Sales per Month: \$107,142.86

The spreadsheet data shown in the prompt is as follows:

Profit	40000

Prompting for Thinking

Getting That First Draft

- Here's where Pattern #1 above makes sense

What can I help with?

Please create a presentation outline for my upcoming sales meeting. Ask me questions until you know enough to get this done. Ask these questions one at a time.



Ask the first question now.



Canvas: Working on A Draft

The screenshot displays the Canvas AI interface. On the left, a chat window shows a system message from 'Canvas' asking for questions to create a presentation outline. Below it, a user question is highlighted with a red box: 'What is the main objective of this sales meeting (e.g., performance review, strategy planning, team motivation)?'. On the right, a presentation outline titled 'Sales Meeting Presentation Outline' is shown. It lists three slides: 'Slide 1: Title Slide' (Meeting Title, Date and Time, Company Logo), 'Slide 2: Agenda' (Brief overview of what will be covered in the meeting), and 'Slide 3: Sales Perform...' (Key metrics from the previous quarter/month, Highlights and challenges). A red box highlights the 'Slide 2: Agenda' section, which includes a text box with the text 'Brief overview of what will be covered in the meeting.' and a floating toolbar with 'Ask ChatGPT', 'B', 'I', and 'Aa' options.

ChatGPT 4o

Canvas Please create a presentation outline for my upcoming sales meeting. Ask me questions until you know enough to get this done. Ask these questions one at a time.

Ask the first question now.

Sales Meeting Outline

What is the main objective of this sales meeting (e.g., performance review, strategy planning, team motivation)?

Sales Meeting Presentation Outline

Slide 1: Title Slide

- Meeting Title
- Date and Time
- Company Logo

Slide 2: Agenda

- Brief overview of what will be covered in the meeting.

Slide 3: Sales Perform...

- Key metrics from the previous quarter/month.
- Highlights and challenges.

Summary

- Think of AI as a 'doer' of mental work
- What mental work do you do you wish could get automated?

Prompting Clinic

What's the Dumbest Thing
You Waste Time On (At
Work)



Questions?

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