



Hacking the prompt: Using AI to analyze and visualize data

Victoria Perera Rojas & Raquel Trinidad

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A serene landscape at sunrise or sunset. The sun is low on the horizon, partially obscured by a dense forest of tall, thin trees on the left. The sun's rays create a bright, hazy glow that fills the sky and reflects on the calm water of a lake in the foreground. The water is dark, with the golden light of the sun creating a shimmering path of reflection. In the distance, a line of colorful tents (purple, green, and yellow) is visible on the shore, suggesting a campsite. The overall atmosphere is peaceful and welcoming.

Welcome.

Agenda

Introduction

Key Concepts

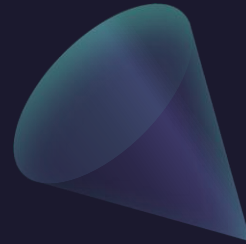
Activity

Prompt Engineering

Activities

Key Takeaways & Closing Reflection

Goodbye





Goals

- Demystify Artificial Intelligence
- Experiment and gain practical experience with AI
- Learn about prompt engineering
- (Hopefully) Leave less intimidated by AI



Grounding Values

Collaboration

Learning

Encouragement

Take it at your pace



What is *Artificial Intelligence* (AI)?

A dark blue background featuring three glowing geometric shapes: a sphere in the upper left, a cube below it, and a large torus (donut shape) on the left side. All shapes have a teal-to-blue gradient glow.

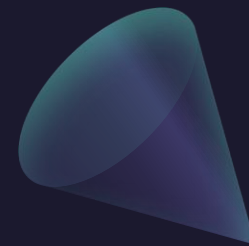
Poll

What is your experience
with AI?

Diad introductions

Introduce yourselves

1. What is one thing you learned how to do in 2023?
2. How did you learn it?
3. Did you use any technology to support your learning?



[4 Minute Timer](#)

Key Concepts

Generative vs non-generative/traditional ai

Hallucinations

Prompt engineering

A lightbulb is centered on the right side of the slide. The background is a gradient of yellow and orange. A dark blue wire extends from the bottom of the lightbulb, curving towards the right. There are several dark blue lines radiating from the top of the lightbulb, suggesting light or ideas. The word "Activity" is written in a large, white, serif font over the lightbulb.

Activity

Let's see what ai can do for us

1. Teach me something I *already* know.
2. Teach me something I *don't already* know.

Triad Share

- What did you ask?
- What did the AI get right? What did it get wrong? Did it hallucinate?
- Did you respond to it? What did you ask?



Reflection

- What did you learn?
- Any insights?



Prompt Engineering Skills

- What makes a good chat prompt?
- Task + Context + Clarifying Questions

Task only

"Give me instructions to analyze my data."

Task + Basic Context

"Give me instructions to analyze my data. I have data for each participant in an arts program including their race/ethnicity."

Task + Context + Clarifying Questions

Please show me step by step how to summarize my data in Excel using a pivot table. I have data for each participant in an arts program including their race/ethnicity and program outcomes. I would like to know the percentage of each race/ethnicity. Feel free to ask me any clarifying questions first."



A conceptual image featuring a lightbulb as a central element. The background is a gradient of yellow and gold, with a dark blue wire extending from the bottom of the bulb. The word "Activity" is written in a white serif font, and "Analyze datasets" is written in a smaller, lighter font below it.

Activity

Analyze datasets

Summarizing Data

Dataset 1 Common Object Types

Column Labels		
Public Library		
Row Labels	Count	Percentage
Sculpture	68	38%
Mural	33	19%
Painting	26	15%
Print	16	9%
Textile art	6	3%
Glass	5	3%
Etching	4	2%
Installation	4	2%
Plaque	3	2%
Picture	3	2%
Drawing	3	2%
Garden	2	1%
Floor	2	1%
Ephemera	1	1%
Tile	1	1%
Photograph	1	1%
(blank)		0%
Grand Total	178	100%

Dataset 1 Prolific Artists

Row Labels	Count of ArtistName
Jordan, Emile	30
Sculpture	30
Unknown	9
Ephemera	1
Monument	1
Mural	1
Sculpture	4
Textile art	2
Greene, Jason	9
Painting	9
Middlebrook, Willie	7
Mural	1
Painting	1
Photograph	5
Abeles, Kim	7
Installation	1
Sculpture	6
Grand Total	62

Dataset 2 Community Resource Access by Age

COUNTA of Ac Accessed Community Resources			
Age	No	Yes	Grand Total
18-24	40.00%	60.00%	100.00%
25-34	15.38%	84.62%	100.00%
35-44	47.22%	52.78%	100.00%
45-54	53.06%	46.94%	100.00%
55-64	54.39%	45.61%	100.00%
65-74	31.58%	68.42%	100.00%
75+	37.50%	62.50%	100.00%
Grand Total	44.50%	55.50%	100.00%

Group Sharing

- What was your initial prompt? Did it work?
- How did you adjust the prompt or what clarifying information did you provide?
- What did you learn?



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Activity

Analyzing your own data or
visualizing dataset #1

Diad activity

- **Explore and Visualize your Own Data**

Think about 1-2 things you would like to know about your own data.
Write down what questions you want to be able to answer using your data then craft your prompt based on what you want to know.

OR

- **Visualize the Practice Datasets**

Using the summarized data from the previous activity or your own data, ask the ai for instructions on how to visualize the data in your software of choice.

Group Sharing

- What was your initial prompt/approach? Did it work?
- How did you adjust the prompt or what clarifying information did you provide?
- What did you learn?





Key Takeaways & Closing Reflection

Learning new things take time and get perfected
with practice

Keep experimenting

Use it with skepticism



Thank you

