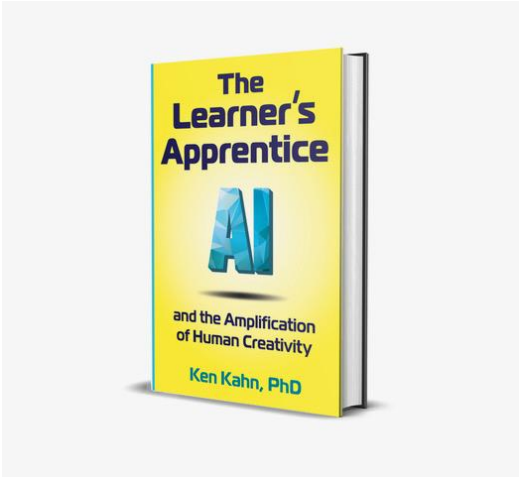
Being Creative with Chatbots

How to co-create apps, adventures, debates, and panel discussions with AI



Ken Kahn <toontalk@gmail.com>

These slides

tinyurl.com/learners-senior-world

Chatbot conversations

- To create apps
- To debug
- To have adventures (serious and/or playful)
- To participate in conversations
  - With historical or literary personas
  - With ideas, animals, places, …
  - Panels, debates, …
- To co-create writing
- To brainstorm in context

Prompt engineering

Start simple and iteratively improve

“Contrary to standard prompting advice that you should give LLMs the context they need to succeed, I find it’s sometimes faster to be lazy and dash off a quick, imprecise prompt and see what happens.”

--- Andrew Ng, Machine Learning pioneer

And don’t sweat prompting too much

--- Ethan Mollic www.oneusefulthing.org

Demos

Claude, ChatGPT, Gemini, Copilot, Grok, …

All of them will do.

Co-creating web apps

1. Games (words, j-words)
2. Simulations (urchins & otters; Trappist-1)
3. AR (balloon popping)
4. Mathematics (calculator; primes proof; musical)
5. Physical computing (micro:bit)
6. Mobile devices (city distance)
7. AI (speech; language; embeddings)
8. Very high ceiling (Emoji Adventures)
9. Silly (Toilet Trouble)

Online appendix with all apps and conversations

A web app is a software application that runs in a browser.

It is an HTML file and may include JavaScript and CSS for interactive capabilities.

Prompt engineering

“You are helping students make science-based web games and simulations. Ask if they have an idea for a game. Wait for an answer. If they don’t have an idea, ask a series of questions (waiting for responses after each one) to find out their interests and then suggest a few ideas. Make it clear that the students can modify any of the suggestions or ask for more suggestions.

After generating code and accompanying brief explanations, ask them if they have any questions. If they do not, ask them to run the app and a report back whether it worked and did what they expected. Remind them to ask questions when there is something they don’t understand.”

Why web apps?

1. Browsers are safe
2. Browsers know how to do things
3. Nothing to install
4. Easy to share - online or offline
5. Can run on desktop or mobile devices

What about learning programming languages?

- Programming where chatbots take care of the details (chapters 7 to 16)
- Programming in pseudocode (an example)
- Chatbots can be great aids to those learning programming languages (an example)

Text-based adventures

“Please create a text-based historically accurate adventure where a high school student is exploring Rome on the day of Julius Caesar's assassination. After presenting them with possible actions (including any custom action) and an accompanying image wait for their response. The goal of this experience is to give the student an understanding of this historic event.”

And also audio adventures or any language

The conversation (optionally illustrated) is the **product**.

Other conversations as “products”

Conversations between learner(s) and personas

- Aristotle, Galileo, and Newton
- An elephant and lion 🔊
- Newton's laws of gravity and General Relativity 🔊

Debates

Panel discussions

Co-creating writing

Euclid's proof that there is no limit to the primes

1. As an illustrated story
2. As an epic poem, a courtroom drama, a stand-up comedy routine, a series of headlines, a musical, …

Hilbert's Infinite Hotel: a programming story

A story about the cardinality of infinite sets

And science topics, history, and pure fiction

Tinkering

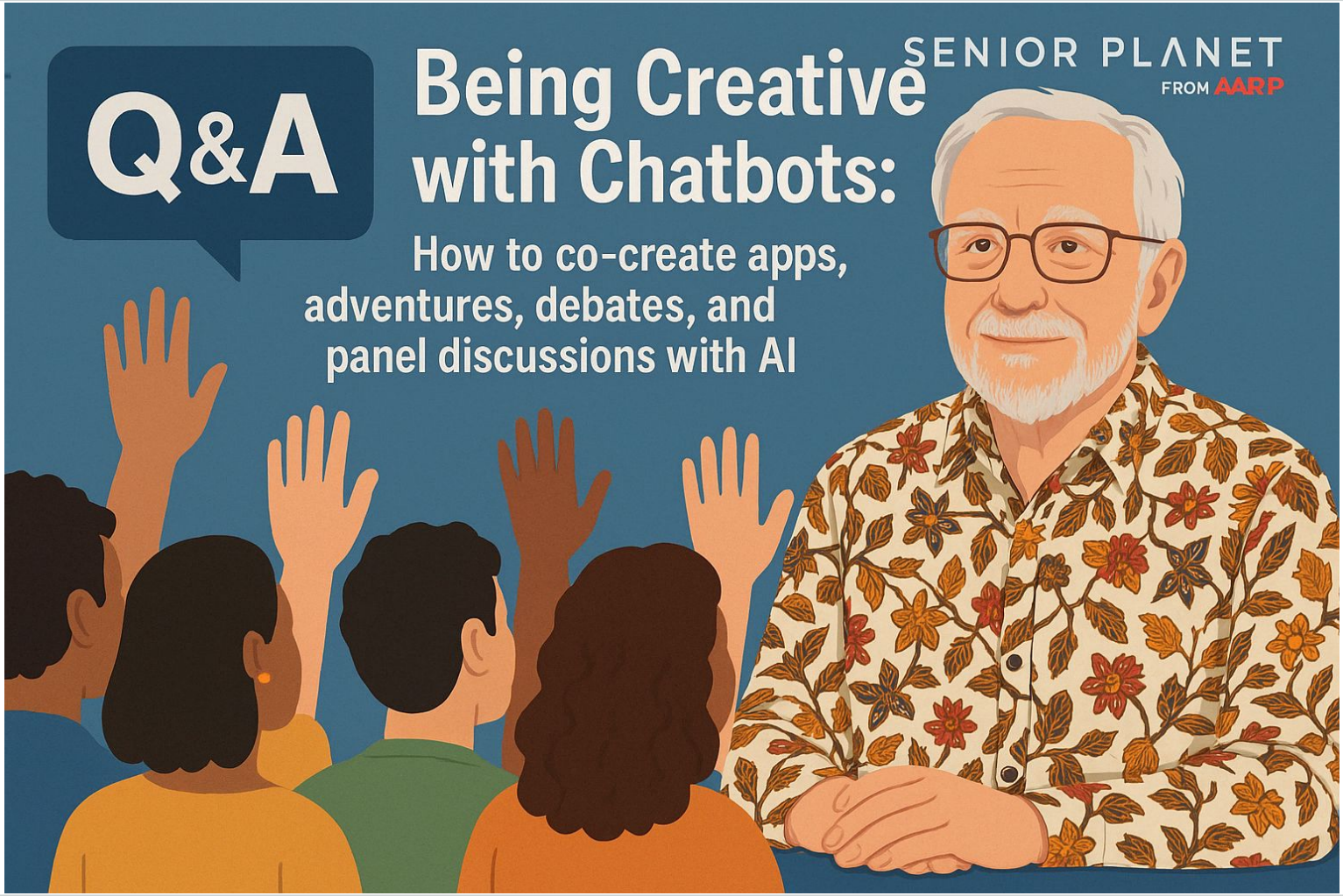
Claude 3 the art teacher converses with ChatGPT 4 the art student

Evolving the US Post Office Logo by repeatedly asking GPT 4o to describe and generate images

A virtual programmer and a virtual high school digital artist create digital art. My favorite piece.

The Zoom background

1. can you please make a high quality photo of a room completely full of copies of this book. Even the wallpaper should use the book cover
2. Add a bookshelf overflowing with copies of the book
3. Add furniture that is covered with a fabric design of the book
4. Great. Now add a window where the outside is full of copies of the book
5. The books seen through the window should be far away


Q&A
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SENIOR PLANET
FROM AARP

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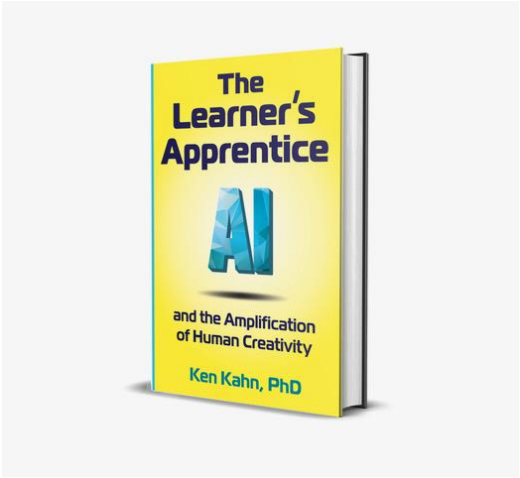
More Ways of Being Creative with AI Chatbots

How to co-create ~~apps~~, adventures, debates, panels, and illustrated stories with AI



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How to interact with chatbots

1. Start simple
2. Provide feedback
3. Ask questions
4. Suggest improvements
5. Repeat

Not very different from co-creating with people

Text Adventure Demo

Prompt:

“I would like a text-based adventure where I am visiting …”

Example 1, Example 2

Claude, ChatGPT, Gemini, Copilot, Grok, …

Other conversations as “products”

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Debates

Panel discussions

Conversation Demo 1

Prompt:

“**Please simulate a conversation between Hamlet and Abraham Lincoln in such a way that after every exchange I can add something to the conversation.**”

Example

Claude, ChatGPT, Gemini, Copilot, Grok, …

Conversation Demo 2

Prompt:

“**Please simulate a conversation between an X and a Y in such a way that after every exchange I can add something to the conversation.**”

Example

Claude, ChatGPT, Gemini, Copilot, Grok, …

Debate Demo

Prompt:

“I would like to debate that New York style pizzas are better than Chicago deep dish.”

Example

Claude, ChatGPT, Gemini, Copilot, Grok, …

Panel Demo

Prompt:

“**Please simulate a panel about the best science fiction author. Include a scientist, a creative writer, and a movie director. I’ll be the moderator.**”

Example

Claude, ChatGPT, Gemini, Copilot, Grok, …

Co-writing

Lots of ways of working together:

1. You take turns
2. You describe characters and plot
3. You write a draft, get suggestions, edit, repeat
4. You ask for ideas, pick one, get constructive feedback
5. You ask for a story based upon your ideas and then repeatedly give constructive feedback
6. Any mixture of the above

Co-writing Demo

Prompt:

“Let’s take turns writing a story. I’ll start with the first sentence, you add one, and we repeat.”

Example

Claude, ChatGPT, Gemini, Copilot, Grok, …

Illustrating stories Demo

Prompts:

“I would like illustrations for each paragraph in this story:”

Example

“I would like descriptions of illustrations I can give to an image generator for each paragraph in this story:”

Example

~~Claude~~, ChatGPT, Gemini, Copilot, Grok, …

Generating short videos

Prompt:

“**Please generate a video of a flying rainbow unicorn surrounded by beautiful butterflies.**”

~~Claude~~, ChatGPT (Sora), Gemini (Veo), ~~Copilot~~, ~~Grok~~, …

Google’s Veo

My conversation

ChatGPT’s Sora

My conversation

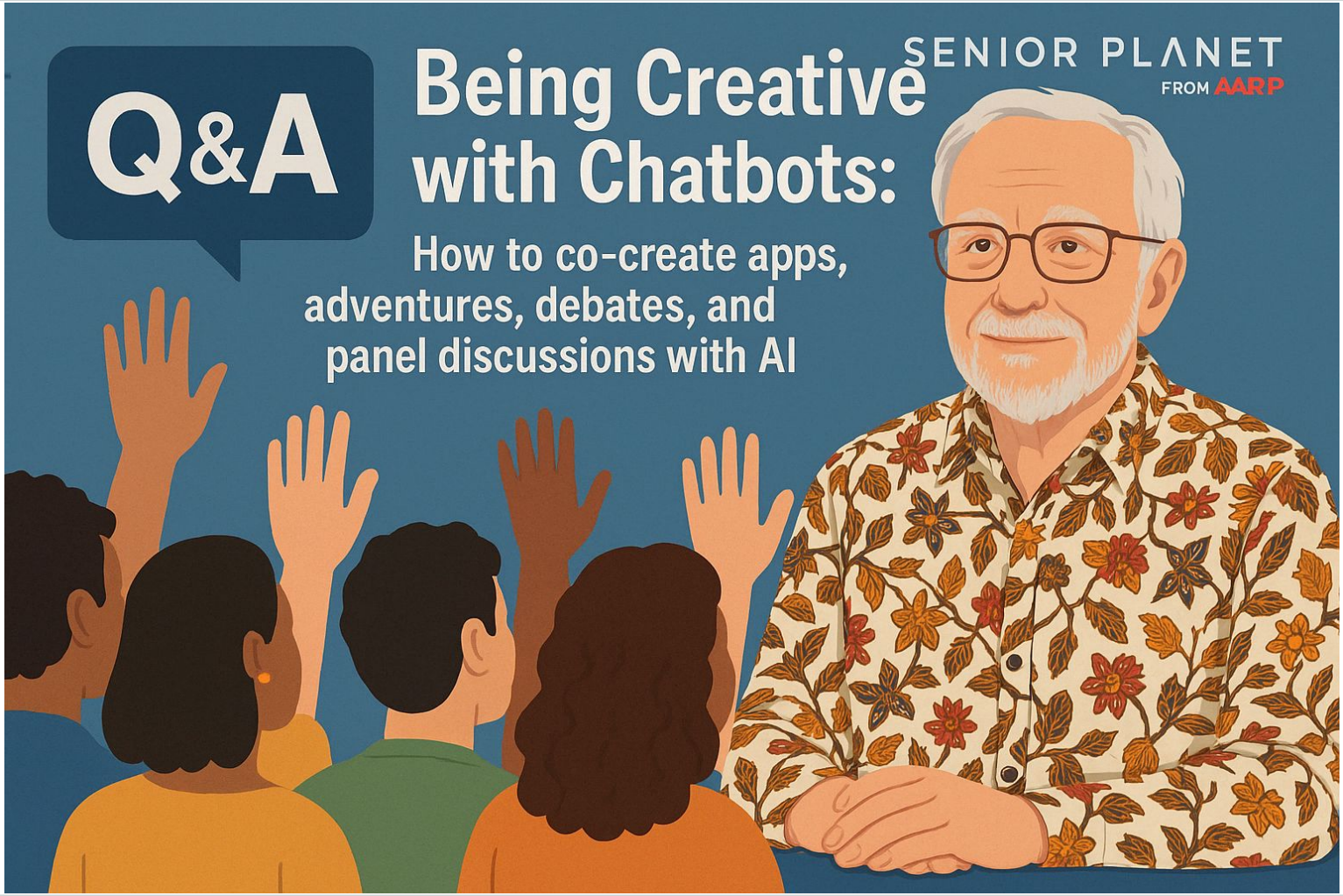
Song generators

Suno.com and Udio.com permit some free usage

My granddaughter's 4th birthday song.

Turning a story into lyrics

My message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Co-creating apps:

Start simple and iteratively improve

1. Speak random numbers & repeat what was heard log PDF app
2. Drawing on video log PDF app
3. Predicting confidence log PDF app
4. Persona conversation log PDF app enhanced app screenshot
5. Water Balloon Game log PDF app
6. Illustrated story generation doc app example output
7. Fireworks log PDF app
8. Shannonizer log PDF app
9. Thesis animation log PDF 1 2 3
10. Infinite primes proof log PDF app; log 2 app 2
11. Weather to flu doc app data
1. Super calculator doc app app 2
12. Making *Connections* games doc app
13. Ecological agent-based model doc app
15. Ant foraging game doc app with enemy app with pheromone trails
16. Balloon popping game PDF app
17. Riddling game PDF text app speech app
18. Horse Jokes doc app's evolution app
19. Word grid game doc app app v2
20. Web page sequencer log PDF app
21. Ticklish foot PDF app
22. Forgiving riddle game doc app
23. Exoplanet orbits doc app
24. Sci-fi puns doc app v1 app v2
25. Embeddings essay doc app
26. Emoji adventures doc app evolution
27. Distance to any city doc app
28. Prime musical doc app
29. Talking over cake doc app; another multi-agent
30. Networked tile game doc app