

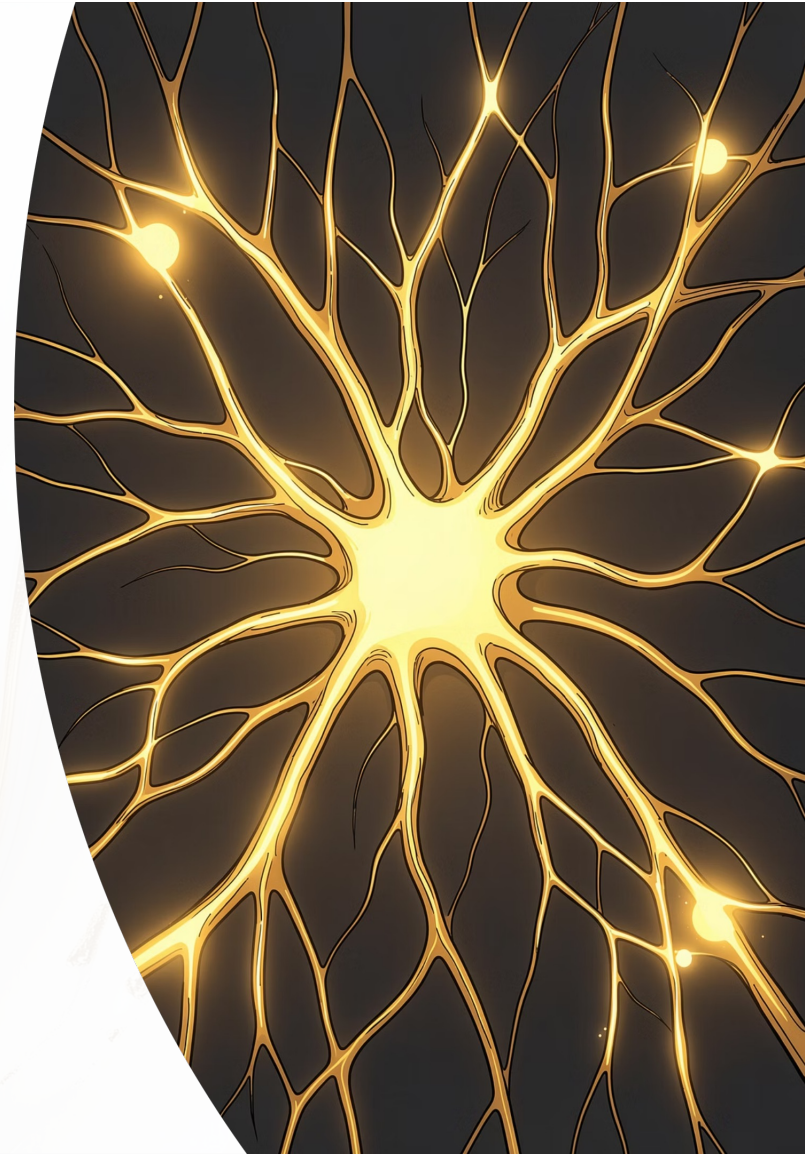
AI in Your Corner

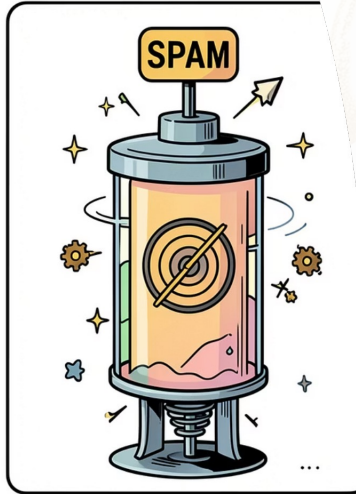
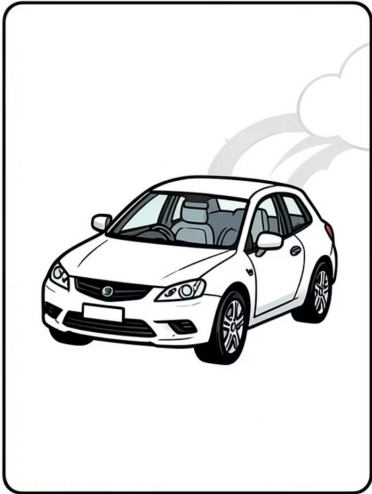
Using Large Language Models to Enhance Your Retirement

Kevin Marlowe, PhD

NASA Langley Alumni Association

June 9, 2026





What Do We Mean When We Say "AI?"



Self-Driving Cars?



Spam Filters?



Face Recognition?



Large Language Models like ChatGPT and Claude?

Large Language Models (LLMs)

An LLM is a sophisticated **next-word predictor** — trained on nearly all human text ever written.

- Text (and files) in → useful output out
- Trained on most of human text ever written
- Predicts the next most likely word — at enormous scale
- Not "thinking" — pattern matching at a scale no human can match
- Non-deterministic: ask the same question twice, get different answers



Three Things to Know Before You Start using an LLM

⚠ It Hallucinates

🔍 It's Not a Search Engine

💬 It Gets Better as You Push Back

You may well be right — let me check.

Searched the web >

You were close but the correct figure is **\$32,200**, not \$32,300. My original answer was definitely wrong — apologies for that.

Who's Who in LLMs ("Generative AI")



ChatGPT



Perplexity

 Claude

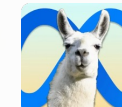
Claude



Copilot

 Gemini

Gemini



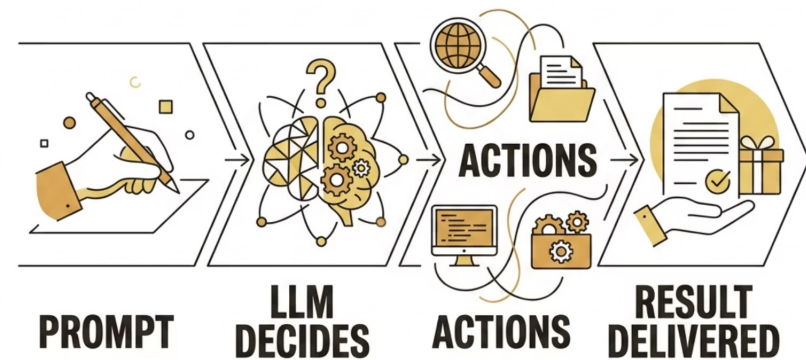
Llama

One More Thing: Agents ("Agentic AI")

LLMs can now **take actions**, not just answer questions.

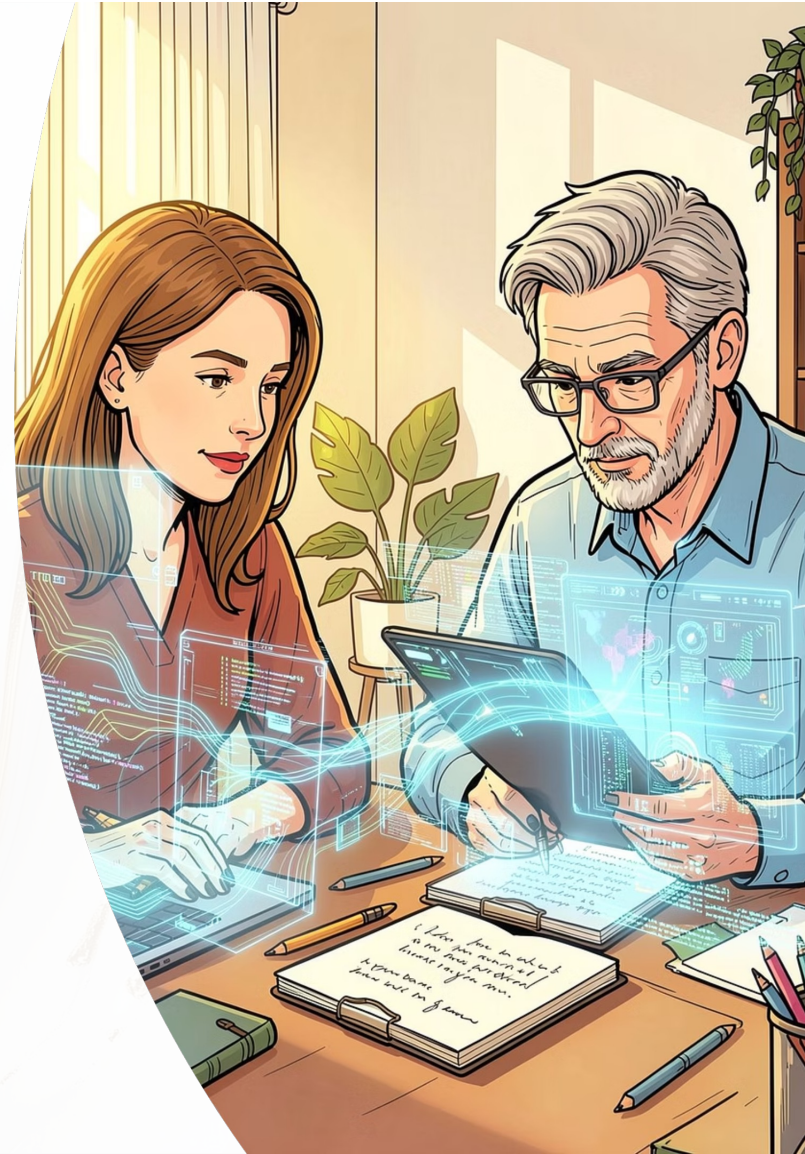
- Browse the web, write files, run code, operate software
- The AI is a task executor, not just an advisor
- Real today, but more setup required
- We'll see a live example later in the talk

Agentic AI: task executor, not just advisor

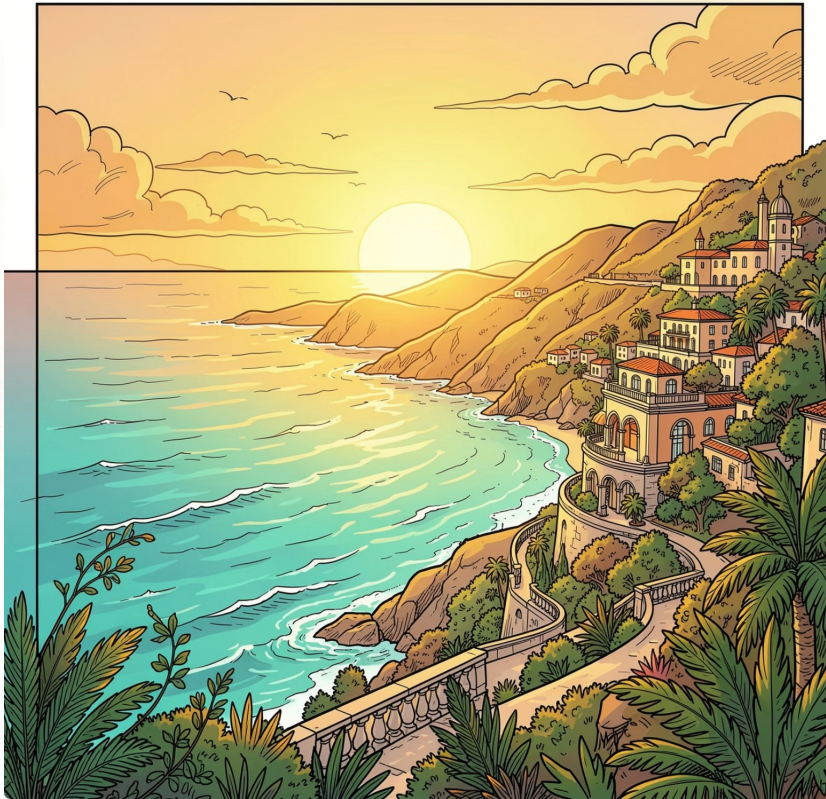


You Can't Break It

- The first prompt doesn't have to be perfect
- Correction works
- Context is your friend



Let's Try It: Retirement Use Cases



- Drafting emails and letters
- Summarizing complex documents
- Planning trips or events
- Researching products or services
- Learning new topics quickly

AI At Work - Examples

The next few minutes are live — and backed up with screenshots in case the wifi disagrees with us.



Plain browser search

what you already do



Browser + LLM widget

same question, richer answer



Compound interest explainer

ask a question, get a calculator



Insurance appeal letter

notes in, formal letter out



Tax question

caught something the software missed

dedu x +
com/search?q=What%27s+the+2026+standard+deduction+for+%27married+filing+jointly%3F

ogle
What's the 2026 standard deduction for 'married filing jointly?'

RS (.gov)
https://www.irs.gov/newsroom/irs-releases-tax-inflation-adjustments-for-tax-year-2026-...
Releases tax inflation adjustments for tax year 2026, ...
2025 — Standard Deduction. For tax year 2026, the standard deduction increases to \$32,200 for married couples filing jointly. For single taxpayers ... [Read more](#)

Tax Foundation
https://taxfoundation.org/Data
Tax Brackets and Federal Income Tax Rates
2026 Standard Deduction ; Single, \$16,100 ; Married Filing Jointly, \$32,200 ; Head of Household, \$24,150 ... [Read more](#)

Fidelity
https://www.fidelity.com/learning-center/smart-money
Standard deduction 2026: What it is and how it works
Standard deduction for 2026 ; Single, \$16,100 ; Married filing jointly, \$32,200 ; Married filing separately ; Head of household, \$24,150 ... [Read more](#)

Bipartisan Policy Center
https://bipartisanpolicy.org/explainer/2026-federal-income-tax-brackets-and-interactive-calculator
Federal Income Tax Brackets and Interactive Calculator
2026 — Deduction phases out from \$242,000-\$252,000 for married filing jointly if spouse has a 401(k) or 408(a) plan. Roth IRA, \$7,500, \$1,100 for ... [Read more](#)

National Taxpayers Union
https://www.ntu.org/foundation/tax-page/what-are-the-2026-federal-income-tax-brackets-and-interactive-calculator
Are Federal Income Tax Rates for 2025 and 2026?
The 2026 standard deduction will rise to \$16,100 for single filers and married filing separately, \$32,200 for married filing jointly, and \$24,150 for heads of ... [Read more](#)

EXAMPLE 1

Plain Browser Search

This is what you already do. When you need to find a specific fact, a website, or a simple answer, a traditional search engine remains fast and effective.

- Quickly locate information or specific URLs.
- Best for factual queries with clear, existing answers.
- Familiar and instant, no learning curve.
- "What's the 2026 standard deduction for 'married filing jointly?'"
- 'What's the best time of year to visit Japan?'

[link to Google](#)

EXAMPLE 2

LLM-Assisted Search

One synthesized answer with sources. You verify what matters.

- ["What's the 2026 standard deduction for 'married filing jointly?'"](#)
- ["What's the best time of year to visit Japan?"](#)

- What's the 2026 standard deduction f

uction for married filing jointly is **\$30,000**.

2024 and \$30,000 in 2025 — the IRS made a r
rom 2025 to 2026 at \$30,000.

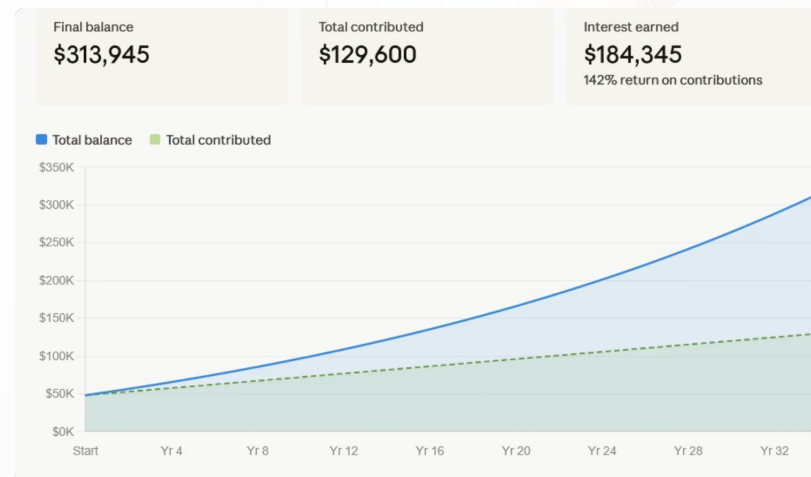
visor — worth confirming with the IRS wel
tuation.


EXAMPLE 3

Ask for Tools

"Explain how compound interest works and give me an interactive calculator I can play with."

- Most modern LLMs can write software - either for their own use or for yours
- The code quality usually isn't up to "human programmer" standards for clarity or maintainability - but it works ("vibe coding")



 A textbook explains it. This lets you play with it.

EXAMPLE 4

Writing a Business Letter

Transforming rough notes into a properly structured business letter is now as simple as a single exchange with an LLM.

I need to write a formal appeal letter to my health insurance company. Here are my rough notes on the situation:

claim denied – MRI of right knee, ordered by Dr. Smith at Riverside Ortho – they say it wasn't medically necessary – that's ridiculous, I've had pain for 6 months, tried PT for 3 months, didn't help, she ordered it to rule out a meniscus tear – I'm 55, active, this matters – I want this reversed – policy is through AARP/UnitedHealthcare, claim number is something like 2024-XXXXX – I need to sound professional but firm. Please write a formal appeal letter I can send to the insurance company.


[\(link to Claude\)](#)

EXAMPLE 5

Tax Software Question

Even sophisticated tax software can present ambiguous or incorrect information. In this scenario, the software flagged two potential treatments for a 1099-NEC form, but one was demonstrably wrong.

Instead of poring over complex tax codes or waiting for an accountant, we consulted Claude. It quickly analyzed the situation, providing a clear explanation and identifying the correct treatment, while also outlining why the other option was erroneous.

 Claude sorted it out — with appropriate caveats, offering clarity when automated systems faltered.

Jill received a 1099-NEC for \$2,400 from a nonprofit board she serves on. My tax software is flagging two possible treatments: one as self-employment income subject to self-employment tax, and another as net investment income subject to the Net Investment Income Tax (NIIT). She's not running a business — this is a board stipend for serving as a volunteer director. Which treatment is correct, and why?

[\(link to Claude\)](#)



SECTION 4

Retirement As A Portfolio of Projects

- Fixing Stuff
- Writing Stuff
- Iteratively working through complex problems
- Trip Planning
- Making Pictures

EXAMPLE 6

Expert on Demand



Osmotic blistering in hot tub shell. Already drained. Already drilled. Claude provided:

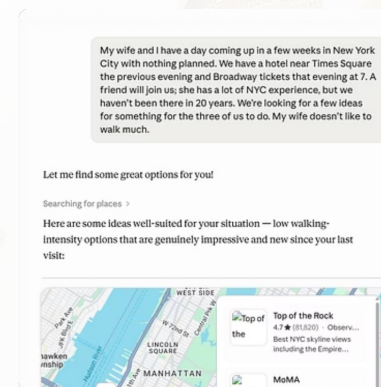
- ✓ Confirmed the osmosis diagnosis
- ✗ Advised against the UV-cure kit (wrong tool for this repair)
- ✓ Prescribed marine-grade two-part epoxy with specific product guidance
- ✓ Flagged the critical sequencing issue: *do not add water before the repair is fully cured*
- ✓ Recommended tooling for shell prep

EXAMPLE 7

The Travel Concierge That Listens

Beyond basic queries, LLMs excel as personalized assistants, anticipating needs and offering context-aware suggestions for complex planning scenarios like a multi-day trip.

- Filtered museums and attractions for **minimal walking**
- Built a **full-day plan** around a fixed 7pm Broadway show
- Handled transportation logistics, neighborhood tradeoffs, and dining suggestions



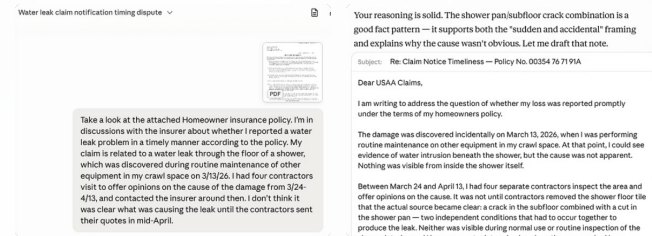
[View conversation](#)

EXAMPLE 8

Your Voice, Improved

Turning fragmented thoughts and rough notes into a compelling, formal appeal letter for a complex insurance dispute is simplified with AI assistance. The key is crafting a message that makes the strongest possible case.

☐ "Described the dispute. Got a formal letter making the strongest possible case — including strategic advice on choice of words."



EXAMPLE 9

Amateur Landscape Architect



Conversation Summary:

01

User: "Describe this house for an AI to rebuild with better curb appeal"

AI: Detailed architectural description generated; provided recommendations

02

User: "Show with recommendations."

AI: Generated first enhanced image

03

User: "Regenerate including the left side with the second door"

AI: Clarified, then updated image

04

User: "Lose the sidewalk to the street"

AI: Provided final version

📄 "Three iterations. Maybe three minutes. I could see the possibilities before spending a dollar."

Tool Note: ChatGPT — currently stronger than Claude for image generation.

EXAMPLE 10

The Thinking Partner

LLMs can act as sophisticated decision-making assistants, navigating complex scenarios with multiple variables and conditional logic to help users evaluate options and identify risks.

i "That last part matters. It knows what it doesn't know."

Four coverage combinations to evaluate: FEHB only, TRICARE only, FEHB primary, TRICARE primary

Multi-turn conversation — not one question, one answer

Built a decision tree with trade-offs for each scenario

Analyzed a medication list for coverage and prior authorization risk

Flagged what it couldn't verify: "Call the office to confirm network status"

(Self + Family)	You'll want to find the 2025 premium for Self + Family under the High Option. GEHA publishes rate tables.	TRICARE has a relatively small enrolment fee for retirees (per year) rather than a high monthly premium. E.g., for 2025: Family enrolment fee for Select Group A: \$364.92/year. Tricare +1
Annual deductible (in-network)	For GEHA High Option: For Self & Family the yearly deductible (in-network) is \$700. GEHA	For TRICARE Select (retirees & family, Group A) the annual deductible (Family) Network is \$300. redstonetricare... +1
Out-of-pocket / catastrophic cap	GEHA High Option: For Self & Family in-network out-of-pocket maximum: \$12,000. GEHA	TRICARE Select: For retirees & family network catastrophic cap (Family) around \$4,261 (Group A) per year. Military Health S... +1
Copays / cost-shares for doctor visits, specialties, hospital stays	The GEHA link shows cost-sharing depending on the service (you'd need to dig into the summary for exact numbers) GEHA +1	TRICARE has copayments or percentages depending on network vs non-network. E.g., Primary care Network: \$37 (for Select, retiree/family, Group A) according to one table. Military Health S... +1
Network vs Out-of-Network implications	GEHA plan gives in-network vs out-of-network cost differences (you'll want to check for your providers) GEHA +1	TRICARE has larger cost-shares or cost-percentage when you use non-network providers. MyAflacabrow... +1
Provider access / preferred doctors	Check if all your current doctors/hospitals are in GEHA's network (this you'll need to verify)	Check if all your current doctors/hospitals are TRICARE network or TRICARE-authorized (important for cost savings)
Medicare transition (Medicare & flexibility)	FEHB will play nicely with Medicare when you hit age 65	TRICARE becomes TRICARE For Life if you have Medicare Part A & B — you'll want to check how this works with your family coverage, dependents, etc.

Next steps you could take

- With the information, here are the concrete steps you can do:
- Obtain the 2025 GEHA High Option benefit brochure and Summary of Benefits (you already have) and find the premium for Self + Family and the copays/cost-sharing tables for in-network/out-of-network. (See references above.)
- Obtain the 2025 TRICARE Costs & Fees Sheet and the cost tables for retirees & family and network for Select and Prime. (See references above.)
- Build a side spreadsheet for your scenario (you, spouse, 19-year-old child) with columns: Premium cost (FEHB) vs TRICARE enrolment fee; Annual deductible; Annual out-of-pocket maximum per year (worst case) for each plan; Copays/cost-shares for office visits, specialists, etc) under each plan; Network risk (how many of your providers are included); Medicare transition; Out-of-area care, future age considerations, dependents staying on plan; Provider access: Are they in the TRICARE network for your region (Norfolk, VA)? Are they in the FEHB network? If a provider is not in the network for one of the plans,

EXAMPLE 11

From Advisor to Task Executor

My home has 379 smart devices across 14 rooms. I connected Claude directly to the system via an integration called "MCP". Claude monitors and adjusts the system according to rules I set.

- Routinely locks doors and turns off lights at night; notifies phones
- Detects whether family members are home and adjusts house parameters (lights, climate)
- Writes and installs new routines based on my crazy ideas ("turn the porch light blue the night before recycling")
- Audited every light and fan for Alexa voice control exposure
- Found that the Office Fan wasn't available on any interface and fixed it — without me touching the app
- Build an offline documentation library describing the whole system in detail



"It doesn't just answer questions. It operates a live system."

The image shows a smart home dashboard on the left and a mobile notification on the right. The dashboard is titled "Overview" and "Welcome Kevin Marlowe". It displays a grid of room status cards for "Upstairs" (Balcony Room, Bay Room, Ryan's Room, Upstairs, Sewing Room) and "Downstairs" (Garage, Kitchen, Living Room, Bedroom, Office, Rec Room). A "Summaries" sidebar on the right lists: Lights (1 on), Climate, Security (2 unlocked), Media players (No media playing), Maintenance (3 low batteries, 1 unavailable), Weather (70°F - Sunny), and Today's energy (0 Wh). To the right of the dashboard, a text block states "Network looks perfect actually:" followed by a list of IP addresses and status checks: 192.168.68.92 ✓, gateway 192.168.68.1 ✓, nameserver 192.168.68.72 ✓, host_internet: true ✓, and supervisor_internet: true ✓. Below this, it says "The web UI is just slow coming up after reboot — HA core is still starting. Give it another 2-3 minutes and try 192.168.68.92:8123 again." A response bubble says "Yep, just slow. Nabu is also working. You can check it out now." Further down, it reports "Used home-assistant integration, loaded tools >", "All three canaries green — Z2M 2.8.0 ✓, AdGuard ✓, Kevin home ✓.", and "All systems restored. Let's update memory to reflect the completed NIC replacement:". A final note says "Replaced memory > Everything is clean. Nice work getting through all of that — it was a rough one. Don't forget to add the DHCP reservation in the Deco for". On the right, a mobile notification titled "Home Assistant" shows three "Doors Locked" events: "Yesterday, 11:00 PM 11 PM door lock complete. Front was: locked, Side was: unknown", "Sat 11:00 PM 11 PM door lock complete. Front was: unlocked, Side was: unlocked", and "Fri 11:00 PM 11 PM door lock complete. Front was: unlocked, Side was: unlocked".

THE APERTURE OPENS

What Would You Use It For?



Health Navigation

Understand diagnoses, prep for visits, research medication interactions.



Creative Projects

Memoir writing, fiction, woodworking, quilt patterns, music composition.



Travel Planning

Co-create itineraries, packing lists, language help, accessibility, visa research.



Home Management

Contractor research, maintenance schedules, appliance repair, permit guidance.



Family History

Research ancestors, write stories, organize generational documents.



Learning Anything

Get calibrated explanations on demand, tailored to your knowledge level.



Civic Engagement

Understand legislation, draft letters, research ballot measures and candidates.



Financial Literacy

Analyze statements, Social Security timing, Medicare options, RMD calculations.

USE AN APPROPRIATE TOOL

Use an Appropriate Tool

What You Need	Best Tool	Speed
Think through / write / iterate	LLM chat (Claude, ChatGPT)	Fast
Analyze a document or pile of documents	LLM with file upload	Medium
Find something	Browser search (Google, DuckDuckGo)	Instant
Current facts / research	Browser + LLM plugin (Perplexity)	Fast
Automate / build something	LLM chat or Claude Code	Medium

REAL CONCERNS

The Concerns Are Real. Here's How to Think About Them.

Hallucination

Confident \neq correct. It will state wrong things without hesitation. Verify anything with real stakes — medical decisions, legal questions, financial numbers. It responds well to "that's wrong."

Privacy

Treat it like a postcard, not a sealed letter. Don't enter SSNs, account numbers, passwords, or medical record IDs. Paid tiers offer better privacy controls and opt-out of training data use.

Currency

It doesn't always know what happened last week. Its training has a cutoff date. Use Perplexity or the web-search toggle for current events, recent news, or anything time-sensitive.

Free Tier Tradeoffs

Free conversations may be used to improve the model. ~\$20/month buys: better models, more capacity, privacy controls, and file upload limits. Start free; upgrade when you hit the limits.

📌 "Use it the way you'd use a very smart stranger on a plane. You'd share a lot. You just wouldn't hand them your wallet."

YOUR ON-RAMP

One Tool. One Prompt. Tonight.

01

Pick one tool

Choose Claude (claude.ai) or ChatGPT (chatgpt.com). Get a free account. No installation needed, and it takes just two minutes to set up.

04

Push back when it's wrong

The AI handles corrections well. Instead of starting over, tell it, "That's not right — here's the correct information." It learns and adjusts effectively.

02

Start with something real

Don't just test it out. Don't ask it to "write me a poem." Pick something you genuinely need help with this week, like planning a trip, understanding a medical term, drafting a letter, or explaining a news topic.

05

Try it again tomorrow

Think of it as a skill that compounds. Each session you have with the AI will make the next one faster and more effective, building your proficiency over time.

03

Give it context

Start your prompt with personal details, such as "I'm a retired [your background] in [your location]..." Providing this context dramatically improves the quality and relevance of the response.

Three Things That Make Every Prompt Better

1

Your Background Matters

Share your profession or experience (e.g., "retired electrical engineer"). This tailors responses to your knowledge level, avoiding generic explanations.

2

Specify the Format

Guide the AI on output style (e.g., "numbered action plan", "formal letter", "explain it simply"). You control how information is presented.

3

State Your Purpose

Explain your goal (e.g., "I need to explain this to my doctor", "I need to make a decision by Friday"). This context ensures the AI's output is relevant and actionable for your needs.

WHERE TO LEARN MORE

Resources

Explore these tools and guides to deepen your understanding and proficiency with AI:



claude.ai

Start here. Its free tier offers robust conversational AI features, ideal for beginners.



[Anthropic's prompt guide](#)

A comprehensive resource for mastering the art of prompt engineering to get better results.



chatgpt.com

A powerful alternative, especially strong for advanced text generation and image creation.



Ask it to teach you

"What's the most effective way to prompt you for [X]?" works surprisingly well for tailored advice.



perplexity.ai

Leverage this tool for current research, as it provides web search integration and citations.

The best way to learn this is to use it on something you actually care about.



Key Takeaways

You spent a career building expertise and judgment. These tools give that expertise a very fast, very well-read assistant.

Start with Claude or ChatGPT

Choose your lane

Iterate, don't restart for the same issue

Verify before you act

📧 **Questions?** Kevin Marlowe, PhD | kevin@teammarlowe.com