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QUINN'S AI UPDATE

Welcome to Quinn's AI Update

Issue #18, February 2024

Hello, AI enthusiasts!

Here's the latest news: Trillions for AI chips? The route to AGI is world simulation models? AGI already exists at OpenAI and they're working on aligning Artificial Super Intelligence?

It's getting crazier out there! Check out this week's newsletter:

- A \$7 Trillion Investment?
- OpenAI's Sora Soars
- AGI is "world models" and just a matter of scale?
- Deep Dive: An Alternate Means of Accessing Reality?
- The New York Times shouts "Oh, the Humanity!"

Read on for more!

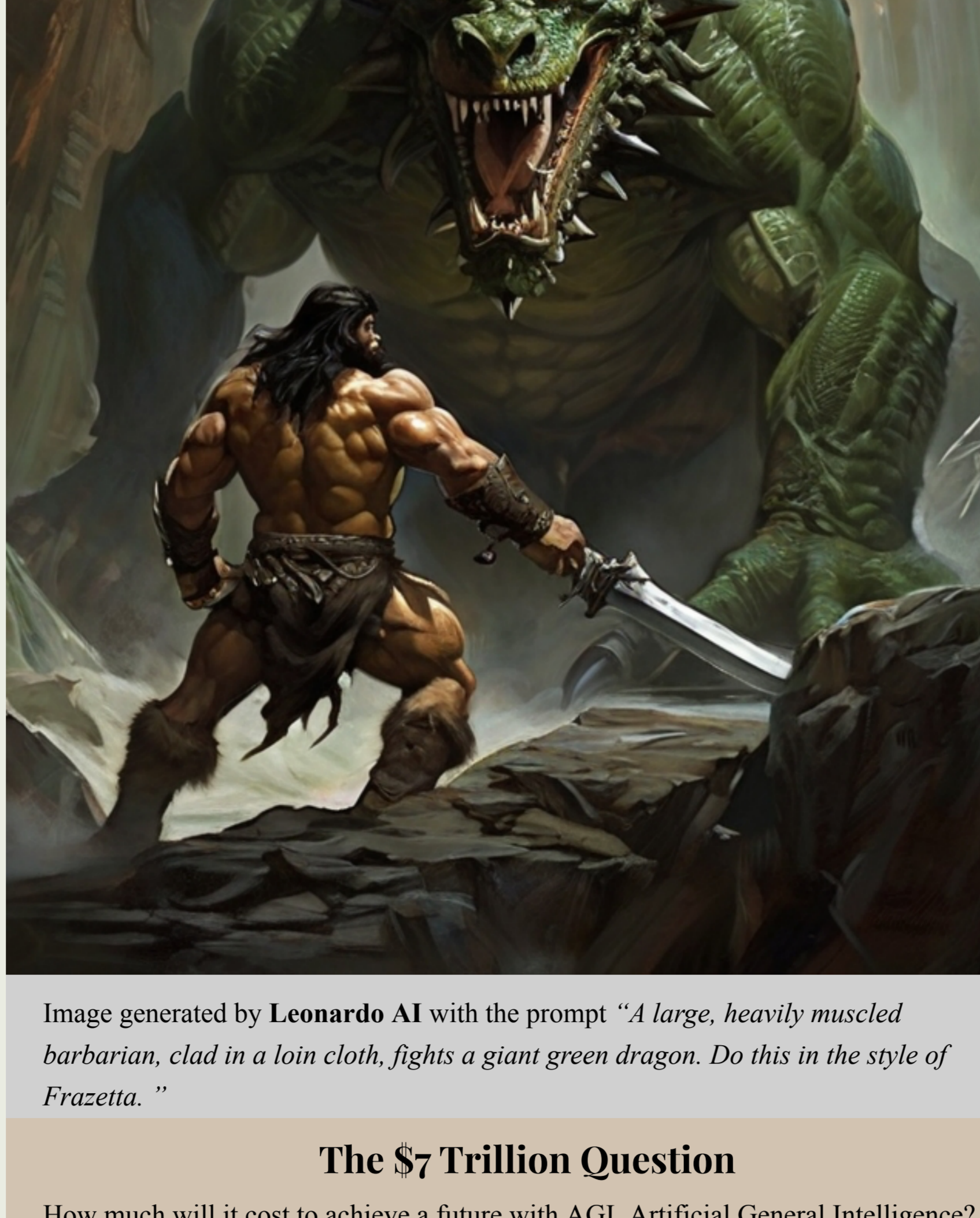


Image generated by **Leonardo AI** with the prompt "A large, heavily muscled barbarian, clad in a loincloth, fights a giant green dragon. Do this in the style of Frazetta."

The \$7 Trillion Question

How much will it cost to achieve a future with AGI, Artificial General Intelligence?

OpenAI CEO Sam Altman has approached investors in the UAE and around the world to try to build a fund worth \$7 trillion to invest in chip manufacturing plants for AI.

To put that in context, world GDP is \$96.51 Trillion. So Sam Altman is looking to spend 7% of world GDP to achieve his vision of Artificial General Intelligence.

You can read about it [here](#).

I'd written back in November about Sam's activities raising money—it may have been part of what got him fired from OpenAI back then. It surprises no one that Altman sees chips as ultimately a bottleneck for him and OpenAI. There just aren't enough being made to get where he wants to go and he wants to free himself from dependence on NVIDIA, AMD and Intel.

But the scale of that undertaking is breathtaking, even for the tech world which usually thinks only in the billions.

In another report, it's estimated that AGI would grow world GDP by between \$2.6 and \$4.4 Trillion dollars per year. That makes the Net Present Value (NPV) massive with an equally massive ROI. How can you say no?

Sora Gets OpenAI Into the Text-to-Video Game

So OpenAI continues to outpace its competition. Everytime Google or Stable Diffusion or MidJourney makes an announcement, OpenAI launches another state-of-the-art product that raises the bar for all competitors—case in point this week: **Sora**, the new text-to-video AI from OpenAI. Check it out [here](#).

I'd written in previous emails about other text-to-video options like Runway and Pika and the effect I hope this has on Hollywood and the ability of independent movie makers to make high-quality video through democratization of technology.

At the Sora link, check out the video examples—smooth drone footage, high-quality landscapes with people moving through them, human figures and faces consistent and coherent throughout. Sora can generate up to 1 minute of video now. More, I'm sure, soon.

Queue Billy Joel: [Say Goodbye to Hollywood](#).

"We (OpenAI) have been a misunderstood and badly mocked organization for a long time. Like when we announced the org at the end of 2015, I remember at the time an eminent AI scientist at a large industrial AI lab was DMing individual reporters saying 'These people aren't very good' and 'It's ridiculous to talk about AGI' and 'I can't believe you're giving them the time of day' and that was the level of pettiness and rancor in the field at a group of new people who were saying we're going to try to build AGI. We don't get mocked as much now."

—Sam Altman, CEO OpenAI

Is Achieving AGI Just a Matter of Scale?

In a story related to the Sora text-to-video release, some AI researchers are claiming that by training AI on video of the world, we are giving it the ability to simulate the world by understanding physics. OpenAI claims that Sora's understanding of physics is an "emergent property", i.e., something the system wasn't trained specifically to do, but that comes about through its training.

On OpenAI's [Sora page](#), in their research creating Sora "Our results suggest that scaling video generation models [making them larger and giving them more compute] is a promising path towards building general purpose simulators of the physical world." So by making them larger, with more processing power, you get good simulations of the real physical world.

Next stop: total visually immersive virtual reality?

Which, it turns out, is a critical component of AGI. Consider that human intelligence includes an understanding about how the world works—gravity pulls you down, water is wet and flows downhill, the sun rises in the east, etc. And we humans learn all that starting at the moment of birth (maybe earlier if all those *Mozart for Babies* products are right). We fall down, we throw a ball through the air with an arc, we want yards with a southern exposure.

AI's don't have bodies—they can't learn about the world by moving in it. They learn by being shown video and images of the real world and they build world models based on that training. So learning the physics of the world is an "emergent property" of that training.

As I wrote back in November, when OpenAI announced "agents", AI's will be able to call on each other, using Application Programming Interfaces, or APIs, in order to extend their capabilities. So in order to get something done for you, you'll enter a prompt (or give a request soon with your voice) and the AI will understand what you intend and then call on other AI agents in order to solve pieces of the problem. With world model simulation, the AGI understands how things work and move in the real world.

Here's Wes Roth explaining how he thinks OpenAI is building AGI using autonomous "agents" (which I've talked about in a previous newsletter) [AGI in 7 Months](#)

(And thanks to Wes Roth for reminding me about the story of the invention of chess and the analogy of wheat grains on a chessboard to explain the meaning of exponential growth. As he says, we're reaching the second half of the chessboard where you see the real power of exponential doubling.)

So AGI in 2025? You ready?

It's the Humanity, Stupid. Or is it?

The New York Times ran an op-ed recently titled: "When Your Technical Skills Are Eclipsed, Your Humanity Will Matter More Than Ever." You can read it [here](#).

The authors, Aneesh Raman and Maria Flynn are identified, respectively, as a work force expert at LinkedIn and president of Jobs for the Future. They argue that "Technical and data skills that have been highly sought after for decades appear to be among the most exposed to advances in artificial intelligence."

So, don't learn to code, I guess, because the AI's will take your job. Then they continue by saying "But other skills, particularly the people skills that we have long undervalued as soft, will very likely remain the most durable."

So I teach these so-called soft skills, in both the UTSA PaCE "Bring Your 'A' Game" program and the "Building and Leading Resilient Teams" program. And to an extent, Raman and Flynn are right—these are the skills humans possess that are just now not in the wheelhouse of the AI's.

But then the authors say this about finding our human-centered skills: "...it's critical for us all to start from a place that imagines what's possible for humans in the age of A.I. When you do that, you find yourself focusing quickly on people skills that allow us to collaborate and innovate in ways technology can amplify but never replace."

And that's where they lose me.

NEVER replace? Seriously? We've already seen that medical AI's not only can make a more accurate diagnosis of a patient's condition but also show more empathy than a human doctor. We're seeing the rise of AI girlfriends that some men prefer to the real thing. You can already ask ChatGPT to rewrite an email to a colleague that is "kinder and gentler" than the one you so desperately want to fire off in anger.

My point is, why make this artificial delineation between skills that humans can do and those that AI can do? Why not incorporate the AI's into helping us adopt and learn "soft skills" too?

I fully endorse the need for students to learn "people skills" and "soft skills". But to my point in the last newsletter, lets align ourselves—and our careers—in a way that incorporates the strength of AI's with our own.

If there was ever a "poster child" for life long learning, by the way, the advent of AI is it.

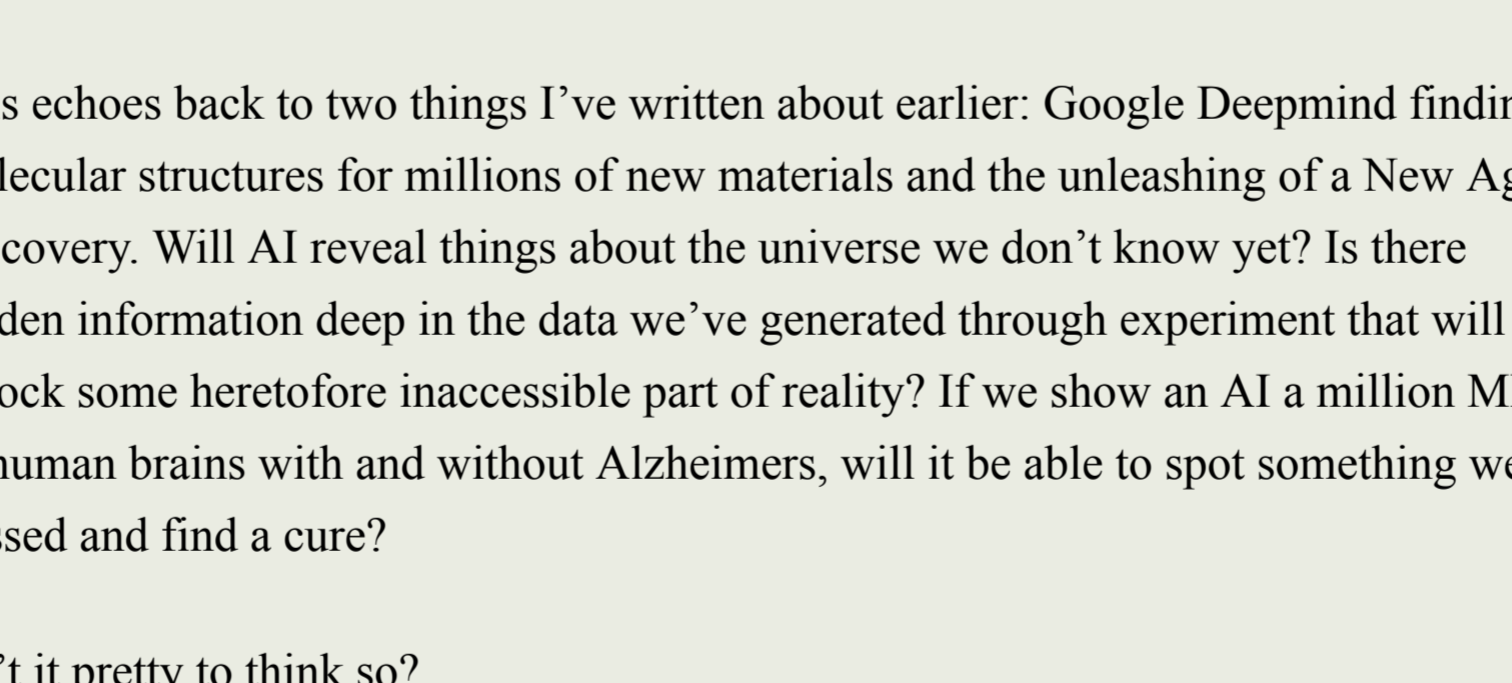


Image generated with **Leonardo AI** with the prompt "A view from orbit around Jupiter of a giant spacecraft being constructed by robots similar to the scene in Ken MacLeod's novel 'The Stone Canal'"

Deep Dive: Henry Kissinger (RIP), AI, and Man's New Best Friend?

If you had asked me at anytime in my life the odds of my writing about Henry Kissinger's thoughts on the subject of AI, I'd have estimated that at somewhere between zero and nil.

But, here we are.

Just before his passing, Kissinger published a book titled [The Age of AI: And Our Human Futures](#), along with co-authors Google CEO Eric Schmidt and Daniel Huttenlocher, dean at the MIT Schwarzman College of Computing. I'm not done with it, but a section of it really stood out for me: the authors claim that AI will give us "an alternate means of accessing—and thus understanding—reality."

That's "accessing" not "assessing." So we're getting another way to "access reality." They go on to discuss how this will be achieved through AI's ability to digest and search for patterns in data that goes beyond human ability—or even human ability augmented by classical computing.

This echoes back to two things I've written about earlier: Google Deepmind finding molecular structures for millions of new materials and the unleashing of a New Age of Discovery. Will AI reveal things about the universe we don't know yet? Is there hidden information deep in the data we've generated through experiment that will unlock some heretofore inaccessible part of reality? If we show an AI a million MRIs of human brains with and without Alzheimers, will it be able to spot something we've missed and find a cure?

Isn't it pretty to think so?

Another sentence in the book that struck me is "When we no longer explore and shape our reality on our own, what does that mean for the future of humanity?"

Some think that the reason modern humans exist and Neanderthals don't was that we domesticated the dog. (The idea is captured in the book [The Invaders: How Humans and Their Dogs Drove Neanderthals to Extinction](#) by Pat Shipman.) With the dog as a helper, we defeated—and eradicated—a dangerous competitor species. Further, dogs helped us hunt food, fight off other predators, and become the apex predatory of Earth.

If AI is an ally, what can we do next? How will humanity and AI—organic and artificial intelligence—shape our future world? What challenges will we face together that require both of our unique qualities to overcome?

Bonus question: What will an AI see when they fire photons through the famous double-slit experiment? Will they be able to collapse the wave function? Or can only humans do that?

(I also just rewatched one of my favorite movies about alternate realities—the 1980 movie *Altered States*, written by Paddy Chayefsky and starring William Hurt (recently RIP) and Blair Brown, so maybe this book's spell on me is just a lingering "contact hallucination" with that movie again.)

"We are at the beginning of the inquiry into what additional levels of perception and comprehension AI may permit. Its application may allow scientists to fill in the gaps in the human observer's ability to measure and perceive phenomena, or in the human ability to process complementary data sets and identify patterns in them."

—Henry Kissinger, *The Age of AI*

What Does the Science Fiction Say?

The **original Star Wars Trilogy**, which includes "A New Hope" (1977), "The Empire Strikes Back" (1980), and "Return of the Jedi" (1983), is a seminal space opera saga that has left a lasting impact on cinema and popular culture. Within this epic narrative, the droids (or robots) play pivotal roles, particularly R2-D2 and C-3PO, who are central to the unfolding story across the galaxy. Throughout the trilogy, the droids not only provide essential support to the human characters but also evolve as characters themselves, displaying loyalty, courage, and a unique form of humanity. Their adventures underscore the idea that heroism can come from the most unexpected places, a resonant message that contributes to the enduring legacy of the Star Wars saga. I remember reading an interview with George Lucas after "A New Hope" was released where he said the two main characters are R2-D2 and C-3PO—they appear in all the movies. You can watch the movies on Amazon, AppleTV and Youtube.

"**Mona Lisa Overdrive**," published in 1988, is the third novel in William Gibson's seminal *Sprawl* trilogy, following "Neuromancer" and "Count Zero." The novel is set in a future where cyberspace, artificial intelligence, and cybernetic enhancements are part of everyday life. It weaves together multiple narratives that blur the boundaries between human consciousness and artificial intelligence, raising questions about what it means to be human in a world where minds can merge with machines and virtual realities. The novel suggests that identity and consciousness are fluid, challenging traditional notions of individuality and selfhood in the face of technological advancement. You can purchase *Mona Lisa Overdrive* on Amazon [here](#).

The Smart Money in AI

- [Meta CEO Mark Zuckerberg recently announced plans to acquire 350,000 high-end chips to build superior AI models](#)
- [Masayoshi Son, the CEO of tech investment firm Softbank, is also reportedly seeking up to \\$100 Billion to build his own supply of AI chips.](#)
- [Microsoft Expanding its AI Infrastructure in Spain with \\$2.1 Billion Investment](#)
- [Singapore's AI ambitions get a boost with \\$740 million investment plan](#)

The Last Word...for now.

Thanks for reading my newsletter—let me know how I can make it even better!

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Let me know what you think!

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