# SquaredCast: Episode 2

## RAMmageddon & The Cost of “No”

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# Intro

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Welcome back to SquaredCast! This is episode two, recorded on March 7th, 2026.

Big show this week! The Pentagon blacklisted an American AI company for refusing to drop its safety guardrails. A Helldivers 2 fan tried to raise money for charity and the internet destroyed his life. Nintendo is suing the U.S. government.

And in the Deep Dive, we're going long on RAMmageddon: AI is eating the world's memory supply, and you're the one paying for it. Plus, we've got a few bits to talk about in the build log as well!

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Let's get into it…

# The Rundown (News)

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## 1. Anthropic, OpenAI, and the Pentagon

Anthropic had been providing its Claude AI to the U.S. military through classified networks run by Amazon Web Services and Palantir. Claude was the first frontier AI model deployed in the Pentagon's classified environment, under a roughly $200 million contract signed in July 2025. In January, Defense Secretary Pete Hegseth issued a memo directing all Pentagon AI contracts to adopt standard "any lawful use" language. Anthropic refused. They wanted two things left alone in their contract: a ban on fully autonomous weapons, and a ban on mass domestic surveillance of Americans. Hegseth wasn't having it. On February 27, he designated Anthropic a "supply chain risk to national security." The only publicly known prior use of a supply chain risk designation was an order issued in September 2025 by the Office of the Director of National Intelligence against Acronis AG, a Swiss cybersecurity firm with reported Russian ties, and that order was limited to intelligence community contracts. No American company has ever been on the receiving end of either designation framework. Trump piled on from Truth Social, calling Anthropic "A RADICAL LEFT, WOKE COMPANY" and "Leftwing nut jobs," and ordering every federal agency to "IMMEDIATELY CEASE" using its technology, with six months to phase it out.

Hours later, OpenAI announced it had signed the exact deal Anthropic wouldn't. Sam Altman later admitted the timing "looked opportunistic and sloppy." But here's the thing. OpenAI then published a statement claiming its agreement "has more guardrails than any previous agreement for AI deployments, including Anthropic's," with explicit red lines against autonomous weapons, mass domestic surveillance, and NSA use. Anthropic CEO Dario Amodei pushed back hard, calling OpenAI's safeguards "mostly safety theater" that "mostly do not work." In an internal memo reported by The Information and Axios, Amodei wrote that Anthropic has not given "dictator-style praise to Trump," while Altman has. So if OpenAI's deal includes the same restrictions Anthropic was fighting for, what was the standoff actually about?

CBS News confirmed the U.S. military used Claude over the weekend during Operation Epic Fury for intelligence assessments, target identification, and simulating battle scenarios in Iran, despite the ban. The Wall Street Journal first reported the use; CBS independently confirmed it with two sources. Defense One reported it could take three months or longer for the Pentagon to replace Claude's capabilities, with some sources estimating up to twelve months. The government blacklisted the tool it was actively relying on in a live conflict.

Anthropic is now suing. Amodei stated: "We do not believe this action is legally sound, and we see no choice but to challenge it in court." Legal scholars at Lawfare published an extensive analysis arguing Hegseth used the wrong legal mechanism, one that provides no due process and no opportunity for Anthropic to respond. Lawfare called it "designation as political theater: a

show of force that will not stick." The designation also says any contractor that does business with the Pentagon may not conduct commercial activity with Anthropic. If enforced broadly, that cuts Anthropic off from a significant portion of the Fortune 500 (the company says eight of the ten biggest U.S. companies use Claude). However, Anthropic, Microsoft, Google, and Amazon have all argued the designation only restricts Claude's use in direct Pentagon contract work, not commercial relationships at large. A bipartisan group of senators has publicly pushed back on the designation. Senator Kirsten Gillibrand called it "reckless" and "self-destructive," adding: "The government openly attacking an American company for refusing to compromise its own safety measures is something we expect from China, not the United States."

One angle that's been getting traction online: a Redditor compiled FEC filings and OpenSecrets lobbying disclosures showing that OpenAI's top two executives donated over $26 million to Trump-aligned political vehicles. Sam Altman gave $1 million to the Trump Inaugural Fund, confirmed by the Brennan Center for Justice. Greg Brockman and his wife gave $25 million to the MAGA Inc. super PAC, making them the largest donors in that six-month fundraising cycle according to Brennan Center and Yahoo Finance/Bloomberg reporting. Anthropic's donations to Trump-aligned vehicles: zero. On lobbying, OpenAI's spend jumped from $260,000 in 2023 to $1.76 million in 2024, per MIT Technology Review and TechCrunch, with a Reddit-sourced estimate of roughly $3 million in 2025 (the official 2025 filing has not been confirmed as of this writing). The Reddit post is careful to note that no document directly proves OpenAI lobbied to blacklist Anthropic, but as the author put it: "The stated policy dispute was a pretext. OpenAI got the same contractual safeguards. The real question is about political loyalty and who knows how to play the Washington access game."

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## 2. A Helldivers 2 Fan Raised Money for Charity. The Community Destroyed His Life.

On February 28, a Helldivers 2 player posted a challenge on Reddit. The pitch was simple: if four Arrowhead developers could complete an operation on the planet Oshaune at Difficulty 10, the game's hardest setting, and upload the video, he'd donate $1,000 to a charity of their choice. The challenge was meant to highlight a community complaint that D10 balance on Oshaune was broken. Other players and content creators added their own pledges. Arrowhead CEO Shams Jorjani posted screenshots of himself and other devs giving it a try in the Helldivers Discord. The whole thing was shaping up to be a great community moment.

It fell apart fast. Within days, the organizer was receiving death threats. His wife was targeted. Trolls tracked down the horse sanctuary where he had volunteered since 2011 and started sending messages there too. He deleted his Reddit account and posted a withdrawal: "I've received dozens upon dozens of messages like this since I first issued the challenge. For my own well being I'll be stepping off reddit and the community as a whole. Stop trying to contact me. The challenge is officially over on my part."

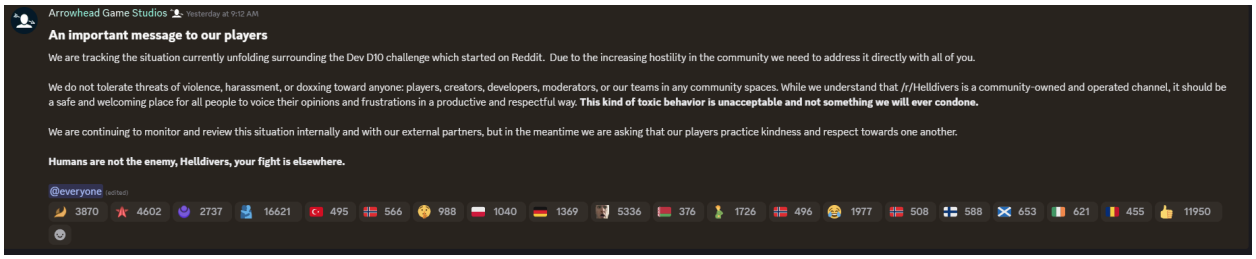
Then on March 6, he resurfaced with an update. According to messages circulating across multiple Helldivers subreddits (which no outlet has been able to independently verify with the employer or sanctuary), the doxxing cost him his job of seven years and got him removed from

the sanctuary he'd volunteered at for roughly 15 years. The Gamer reported his message stating: "I've been banned from the horse sanctuary I've been volunteering [at] since 2011 for security reasons." If the account is accurate, a $1,000 charity pledge about a video game destroyed someone's livelihood.

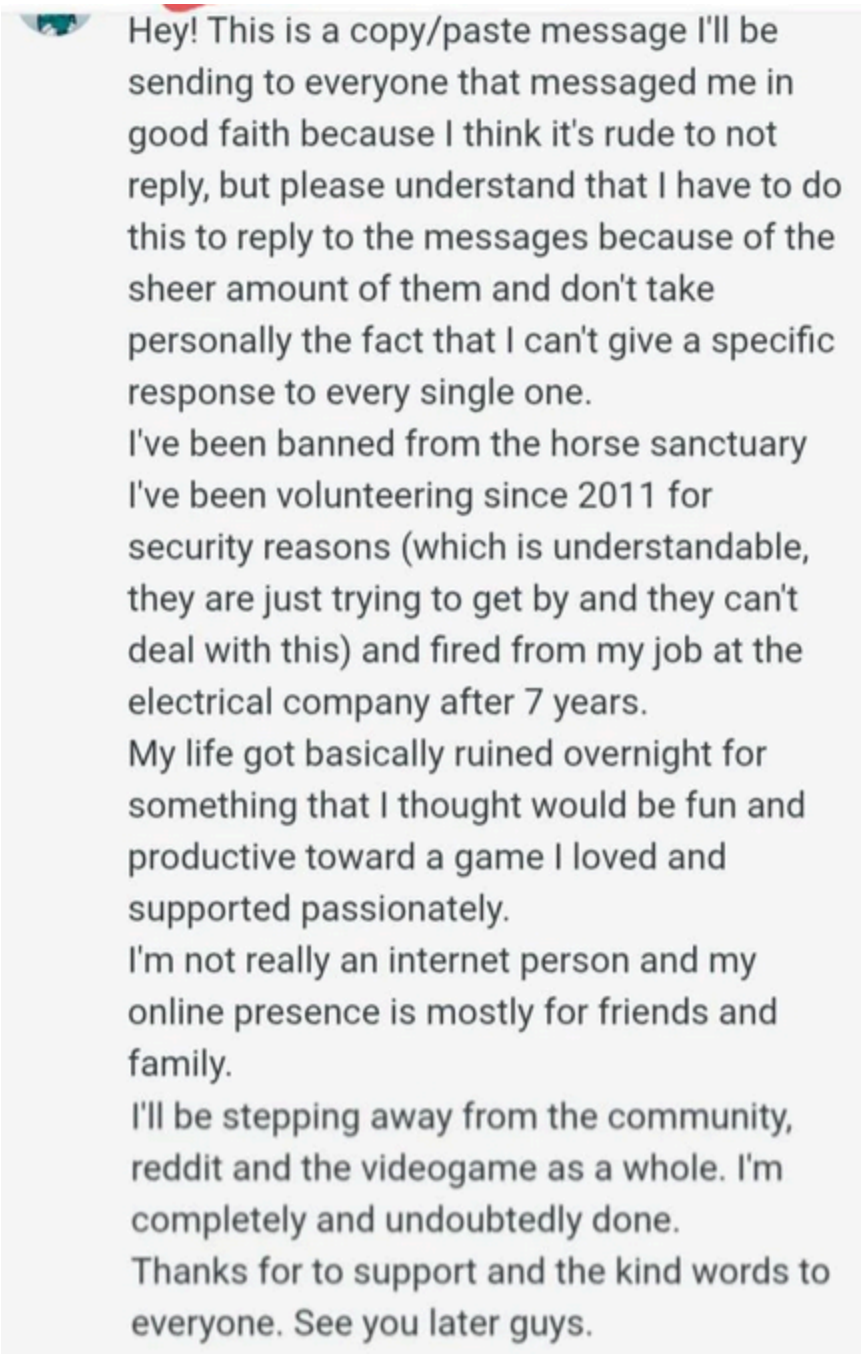
Arrowhead and Sony posted a joint statement to the Helldivers Discord: "We do not tolerate threats of violence, harassment, or doxxing toward anyone: players, creators, developers, moderators, or our teams in any community spaces." They closed with: "Humans are not the enemy, Helldivers, your fight is elsewhere." The r/Helldivers moderation team confirmed "this situation is clearly not the fault of the original user that issued the challenge" and initially banned all future challenges directed at individuals or the studio. They later walked that back after more backlash, replacing the blanket ban with a rule requiring mod approval for challenge posts.

The main subreddit's handling of the situation became its own controversy. Mods locked and deleted posts discussing the doxxing, banned users for what many felt were thin reasons, and the community response was a textbook Streisand Effect. Several smaller Helldivers subreddits became hubs for discussion that the main sub was suppressing. Content creators jumped in with their own coverage. A community-compiled timeline on r/HelldiversUnfiltered tracked every development day by day, and the charity pot reportedly kept growing even after the original organizer withdrew, with community members claiming pledged donations exceeded $5,000.

**Arrowhead response:**




**A message from the Helldivers 2 fan in question (see next page):**

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## 3. Nintendo Sues the U.S. Government Over Tariffs

Since February 2025, the Trump administration imposed escalating tariffs on imports under the International Emergency Economic Powers Act. Japan was hit with a 24% "reciprocal tariff,"

Vietnam with 46%, and tariffs on Chinese goods climbed significantly higher through a series of executive orders. Nintendo manufactures its consoles and accessories overseas, mostly in Vietnam and China, so this hit them directly. The company had to delay U.S. preorders for the Switch 2 and raise prices on accessories. Then on February 20, 2026, the Supreme Court struck down the IEEPA-based tariffs, ruling that the president exceeded his authority under the law.

On March 6, Nintendo of America filed suit in the U.S. Court of International Trade. The defendants list reads like a government directory: the Treasury Department, Department of Homeland Security, Department of Commerce, Customs and Border Protection, and the Office of the U.S. Trade Representative, plus Treasury Secretary Scott Bessent, former Homeland Security Secretary Kristi Noem, and others. Nintendo's lawyers argue that since the tariffs were ruled unconstitutional, every dollar collected under them needs to come back. Their complaint states the tariffs "have, to date, resulted in the collection of more than $200 billion in tariffs on imports from nearly all countries." They didn't disclose a specific dollar amount for Nintendo, but the filing demands a refund "with interest."

Nintendo is one of more than a thousand companies that have now filed similar suits. FedEx and Costco are among the companies in the pile. A judge ruled on March 5 that companies are entitled to refunds, but Customs and Border Protection told the court it can't process them right now. In a court filing obtained by WRAL News, CBP estimated it had collected roughly $166 billion under the now-invalid tariffs and said it was "facing an unprecedented volume of refunds" with "existing administrative procedures and technology" that are "not well-suited to a task of this scale." CBP said a new process for refunds could be ready in 45 days.

Trump, for his part, responded to the Supreme Court loss by imposing new tariffs under Section 122 of the Trade Act of 1974. That statute has never been invoked before. It allows the president to impose tariffs of up to 15%, limited to five months unless extended by Congress. Two dozen state attorneys general filed a separate suit to block the new tariffs. Nintendo's official comment was peak Nintendo: "We can confirm that we have filed a request. We have nothing else to share on this topic."

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## 4. AI Can Unmask Your Anonymous Internet Accounts for About Four Dollars

In late February, researchers from ETH Zurich, a public university in Switzerland, and Anthropic published a paper called "Large-Scale Online Deanonymization with LLMs." They built a four-stage pipeline that uses large language models to match anonymous online accounts to real identities, and they tested it against Hacker News profiles, Reddit users, and anonymized interview transcripts. The system correctly matched 67% of anonymous Hacker News users to their real LinkedIn profiles from a pool of 89,000 candidates, at 90% precision. Total cost for the experiment: under $2,000. Cost per person: one to four dollars.

The pipeline works in four steps they call ESRC: Extract, Search, Reason, Calibrate. It progressively narrows candidates using steps that all look harmless on their own. Summarizing text. Generating embeddings. Ranking candidates. Reasoning over matches. None of it looks like an attack. But strung together, it strips away pseudonymity at scale. For comparison, classical deanonymization methods like the Netflix Prize attack from the 2000s achieved 0.1% recall at 90% precision on the same datasets. The LLM approach is 450 times better. And it improves on its own: increasing model reasoning effort directly improves accuracy, so as frontier models get smarter, this works better by default.

The idea that your scattered anonymous posts are safe because linking them together takes too much effort? Researchers call that "practical obscurity." It's done. Lead researcher Daniel Paleka told CyberScoop: "If your operational security requires that no one ever spend hours or days investigating who you are, this security model is now broken." He also said he was "very worried" and described the capability as "a large scale invasion of privacy." The EFF's Jacob Hoffman-Andrews added that "posting even a small amount of identifying information, in contexts where you might not imagine anyone is trying to unmask you, might result in somebody linking that identity."

Worth noting: Anthropic co-authored this paper. The same week they went to war with the Pentagon over mass surveillance concerns, they published research showing how AI can do cheap, scalable surveillance for anyone willing to spend a few bucks.

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## 5. Apple's $599 MacBook Neo

On March 4, Apple announced the MacBook Neo. $599. That's the cheapest laptop Apple has ever sold. It runs on the A18 Pro chip, which is the same processor inside the iPhone 16 Pro. Apple has never put a mobile chip in a Mac before. The Neo has a 13-inch Liquid Retina display, up to 16 hours of battery life, and comes in four colors: Silver, Blush, Citrus, and Indigo. Ships March 11.

The timing is calculated. IDC, one of the major tech market research firms, expects the PC market to shrink about 11.3% in 2026. Gartner expects PC prices to jump 17% this year because of the ongoing memory shortage. Apple is doing the opposite: launching a cheaper product while everyone else's prices go up. CNN reported that Apple "won't see as steep declines because it's expected to gain some market share" from this move. IDC research manager Jitesh Ubrani was blunt: "That share gain is primarily because of this device." Apple is going after Chromebook and budget Windows buyers, and the timing couldn't be better for them.

There are compromises though. Two USB-C ports, but only the left one is USB 3. The right one is USB 2. Apple didn't mark which is which on the device. No True Tone on the display. No Center Stage on the camera. And 8GB of unified memory in the base model is going to feel tight for anyone doing more than light browsing and document work. At $599, Apple is betting most people won't notice or won't care.

The Neo was the headline of a huge product week. Apple also dropped the MacBook Air M5, MacBook Pro with M5 Pro and M5 Max chips, iPhone 17e, iPad Air M4, and updated Studio Displays. Samsung's Galaxy S26 lineup, which also ships March 11, launched the same week. The S26 and S26+ both saw $100 price increases (the S26 starting at $899, the S26+ at $1,099), though Samsung held the S26 Ultra's base price steady at $1,299. Apple got cheaper the same week Samsung got more expensive. That's not an accident.

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# The Deep Dive (“RAMmageddon”)

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## SEGMENT 1: The price shock

The global memory market is in freefall, and the tech press has started calling it "RAMmageddon." It has its own Wikipedia article now. The "2024–2026 global memory supply shortage." That's how you know things have gotten serious.

TrendForce, the go-to memory market research firm, revised its Q1 2026 DRAM forecast upward *twice* in five weeks. January projection: 55–60% quarter-over-quarter increase. February revision: 90–95% QoQ. PC DRAM specifically? Over 100% in a single quarter. Samsung reportedly doubled its prices by the time contracts were finalized in March, according to Digitimes. Year-over-year, DRAM contract prices were already up 171.8% by Q3 2025. DDR5 spot prices have quadrupled since September.

What does that look like at retail? A 32GB DDR5-6000 Corsair kit that sold for $89.99 in November 2024 peaked at $427.99. XDA Developers tracked 32GB DDR5 kits going from $95 in July 2025 to $350–$600 by January 2026. Individual 16GB DDR5 chips went from $6.84 to $27.20 in three months. A 298% increase. Winbond's president said memory prices would hit nearly 4x by June 2026, with the DDR4 supply gap "so large that it's hard to see how it can be filled."

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# SEGMENT 2: AI ate the world's memory supply

Three companies make 95% of the world's DRAM: Samsung, SK Hynix, and Micron. All three are pivoting hard toward HBM (High Bandwidth Memory), the specialized chips that go into AI GPUs like Nvidia's Blackwell. The margins on HBM are way higher than consumer RAM, so the business decision is obvious. The problem: each gigabyte of HBM eats roughly three times the wafer capacity of a gigabyte of DDR5. IDC's Francisco Jeronimo put it simply: every wafer allocated to HBM "is a wafer denied to the LPDDR5X module of a mid-range smartphone or the SSD of a consumer laptop."

IDC didn't mince words about what this means long-term, calling it "not just a cyclical shortage driven by a mismatch in supply and demand, but a potentially permanent, strategic reallocation of the world's silicon wafer capacity." "Potentially permanent." This isn't a pandemic-style disruption that resolves once logistics catch up. The manufacturers are choosing AI because that's where the money is.

And this isn't the first time concentration in the memory market has worked against consumers. These same companies have been here before. Between 1998 and 2002, Samsung, Hynix, Micron, Infineon, and Elpida ran a price-fixing cartel, coordinating prices on DRAM sold to PC makers like Dell and Gateway. The DOJ busted it in 2002 after Micron flipped and blew the whistle. Samsung pleaded guilty and paid a $300 million criminal fine. Hynix paid $185 million. Infineon paid $160 million. Eighteen people were charged; fifteen were convicted. Samsung executives went to prison. Then in 2010, the European Commission hit nine of them again for

the same scheme, fining them a collective €331 million. And in 2018, Hagens Berman filed another class-action alleging the big three pulled the same move between 2016 and 2017, cutting production in parallel to jack prices up. DRAM prices nearly tripled during that period. That case was ultimately dismissed in 2022 when a Ninth Circuit court ruled the behavior was "more likely explained by lawful, unchoreographed free-market behavior" in a concentrated industry. Whether you buy that or not is up to you. But the pattern is worth knowing when people tell you the current shortage is purely a supply-and-demand story.

SK Hynix has presold its entire 2026 output. Micron's 2026 HBM supply is fully booked. Cloud providers left global memory capacity for 2026 "nearly sold out," and they're already locking in 2027 contracts. OpenAI's Stargate project alone, with Samsung and SK Hynix committed to 900,000 wafer starts per month, may consume around 40% of total global DRAM output. One project. The Big Five hyperscalers collectively plan to spend $650–$690 billion on capital expenditures in 2026. About 75% of that (around $450 billion) is AI infrastructure. Nvidia reported $51.2 billion in data center revenue in a single quarter (Q3 FY2026), up 66% year-over-year. Each Blackwell B200 GPU requires 192 GB of HBM3e. The upcoming B300 needs 288 GB.

*That's* where your RAM went.

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# SEGMENT 3: Everyone's paying for it, and the specs are getting worse

HP's CFO confirmed during Q1 2026 earnings that RAM costs had doubled in a single quarter and now make up 35% of PC component costs, up from 15–18% the quarter before. Dell's COO said he'd "never seen memory-chip costs rise this fast." Lenovo told partners to place orders by February 28 or face March repricing. All five major OEMs (Lenovo, Dell, HP, Acer, ASUS) announced 15–20% hikes.

Gartner's Ranjit Atwal delivered the punchline on February 26: "This is the steepest contraction in device shipments witnessed in over a decade." PC shipments projected to drop 10.4%. Smartphones: 8.4%. Gartner projects the sub-$500 entry-level PC segment will disappear entirely by 2028 as memory costs make low-margin hardware unviable.

Then there's the shrinkflation angle, which might be worse than outright price hikes because most people won't notice. Consumer Reports warned: "That $600 laptop you buy in 2026 might look identical to the 2025 model, but under the hood it may have a dimmer screen and 8GB of RAM instead of 16GB." TrendForce projected budget smartphones will drop back to 4GB of RAM in 2026. HP explicitly said it would "introduce low memory configurations" as part of "demand-supply equation matching." Same price, worse product. Tech shrinkflation at scale.

Nothing CEO Carl Pei called it in a January blog post: "For fifteen years, the smartphone industry relied on a single, reliable assumption: components would inevitably get cheaper... In

2026, that model has finally broken." Samsung's president acknowledged at CES 2026 that "there's going to be issues around semiconductor supplies, and it's going to affect everyone."

For PC builders, it's even uglier. Jeff Geerling (who has an awesome YouTube channel and does incredible things with Raspberry Pis) wrote: "We might be hitting a weird era where the PC building hobby is gutted, [single-board computers] get prohibitively expensive, and anyone who didn't stockpile parts earlier this year is, pretty much, in a lurch." CyberPowerPC reportedly said RAM costs had "ballooned by 500%." Motherboard sales have reportedly dropped 40–50% year-over-year. There are supposedly reports of Micro Center removing price tags from memory kits in some locations and moving to spot pricing. *Spot pricing. At a retail store. For RAM.*

**NOTE**: Spot pricing means the price is whatever the market says it is right now, at the moment of the transaction. No fixed sticker price, no catalog price, no "this kit is $149.99 until we update the shelf tags next month." The price floats based on current supply and demand, and it can change daily or even within the same day.

**NOTE**: The CyberPowerPC "500%," motherboard sales decline, and Micro Center spot pricing claims are from social media and niche reporting, and cannot be reliably confirmed.

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## SEGMENT 4: The cascade (SSDs, GPUs, cars, your electric bill)

This goes beyond RAM sticks. The shortage is rippling through every part of the electronics supply chain.

Kingston confirmed a 246% increase in NAND pricing versus Q1 2025, with 70% of that jump happening in just 60 days. Phison's CEO said every NAND manufacturer told him 2026 production was sold out, all of it, and that a 1TB TLC chip went from $4.80 to $10.70. QLC NAND is backordered by two years. Nvidia plans to slash RTX 50-series production by 30–40%

due to GDDR7 shortages, prioritizing AI. Memory now makes up nearly 80% of a consumer GPU's manufacturing cost.

The auto industry is panicking, too. A Counterpoint Research analyst told Bloomberg: "We are already seeing signs of panic buying within the auto sector." Procurement lead times for automotive memory now exceed 58 weeks. Tom's Hardware reported the situation "may end worse than the 2021 shortage."

And your electric bill. Bloomberg found wholesale electricity costs up as much as 267% in areas near data centers. The PJM grid, serving 67 million people across 13 states, saw capacity auction prices jump 833%. In Virginia, where data centers consumed 26% of the state's electricity in 2023, residential bills are projected to nearly double by 2035. Carnegie Mellon's study found data center growth could increase average U.S. electricity costs 8% nationally and over 25% in Northern Virginia by 2030. NPR's Cathy Kunkel said: "I think it's almost inevitable... that ordinary people are going to end up subsidizing the wealthiest industry in the world."

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# SEGMENT 5: The supply chain is broken, Micron killed Crucial, and relief is years away

On December 3, 2025, Micron killed its Crucial consumer brand after 29 years. Their executive VP: "Micron has made the difficult decision to exit the Crucial consumer business in order to improve supply and support for our larger, strategic customers in faster-growing segments." Consumer shipments stopped by end of February 2026. CRN, an IT industry trade publication, called it what it is: this "eliminates one of three major DRAM manufacturers from consumer markets." When backlash hit, Micron said "We are trying to help consumers around the world," while in the same breath warning the DRAM drought could last until at least 2028.

CEO Wallace C. Kou of Silicon Motion, one of the biggest SSD controller makers in the world, gave the quote of the whole crisis on an earnings call: "We're facing what has never happened

before: the HDD, DRAM, HBM, NAND, all in severe shortage in 2026. Most of our capacity is sold out." Asked about allocation: "Of course, the majority will go to AI and AI servers."

New fabs are under construction, but the timelines are brutal. Micron's Idaho facility targets first wafer output in mid-2027. A second Idaho fab: end of 2028. Their New York megafab: not until 2030. Samsung's Texas fab slipped to early 2027. SK Hynix's Indiana facility, focused on HBM packaging (not consumer DRAM), targets H2 2028. And every single one of these fabs is being built to serve AI demand, not consumers. TrendForce senior VP Avril Wu: "the newfound production won't make a noticeable difference in global supply until 2028." Intel's CEO was blunter: "There's no relief until 2028."

**There's a wild card, though.** China's two largest memory companies are both treating this shortage as their moment. CXMT (ChangXin Memory Technologies) is now the world's fourth-largest DRAM maker, holding about 11% of global capacity according to Yole Group, with plans to reach nearly 14% by 2027. They're building a Shanghai fab two to three times the size of their existing Hefei (pronounced “huh-fay”) headquarters, targeting production in 2027, and filing for a $4.2 billion IPO to fund the buildout. TechInsights assessed that CXMT "still trails the three largest DRAM players by three years," while South Korean experts put the gap at two to three years, down from a decade ago. They've already demonstrated DDR5-8000 and LPDDR5X chips despite U.S. export restrictions, and have reportedly delivered HBM3 samples to Huawei.

Meanwhile, YMTC (Yangtze Memory Technologies), traditionally China's top NAND flash producer, is building a third fab in Wuhan. About half the planned capacity will be dedicated to DRAM instead of NAND, targeting 2027 production. A YMTC supplier told Nikkei Asia: "They started to develop their own DRAM more than two years ago...now it is only a matter of time for them to produce quality DRAM and HBM going forward."

Both companies are on U.S. export restriction lists and can't buy cutting-edge tools from ASML or Applied Materials. So they're building on older-generation equipment and racing to localize their supply chains. Whether they actually close the gap under those conditions is an open question. But if they get meaningful volume online by 2027, even at older process nodes, every chip China makes domestically is one less chip competing for supply from the big three.

Best-case analyst estimate: about 60% probability of meaningful price declines starting Q3 2026, with normalization by Q1–Q2 2027 (no way that’s happening, come on). Worst case (20% probability): late 2027 or early 2028. But "normalization" means returning to pre-shortage pricing trends, not the bargain-bin prices of 2024. Those are gone.

CORRECTION NOTE: The EP1 outline said new fabs "won't make a dent until 2027–2028 at the earliest." This remains broadly accurate, but the consumer-specific timeline is worse. The Idaho fab targets mid-2027 for *first wafer output*, meaning meaningful volume is late 2027 at

best, and the production is allocated to enterprise/AI customers. Consumer relief is late 2028 at the earliest.

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## SEGMENT 6: Is this a bubble?

All of this spending begs a question that's getting louder by the week: are we watching the foundation of the next major technology platform, or the largest misallocation of capital since the dot-com era?

Let's look at The Shiller P/E ratio: The ratio measures how expensive the stock market is relative to what companies have actually earned over the past ten years, adjusted for inflation. It's basically a reality check on whether stock prices match what businesses are producing.

Recently, the Shiller P/E ratio hit 40.58 in early January 2026. In 155 years of data, it's only been sustained above 40 twice: now, and the dot-com peak (44.19). The historical mean is 17.3. Even 1929 only hit about 32.5. The top 10 S&P 500 stocks now make up about 40.7% of the index. RBC Wealth Management warned this "effectively turns the index into a directional bet on AI adoption and monetization."

Goldman Sachs chief economist Jan Hatzius said AI's contribution to 2025 U.S. GDP was "basically, zero." Their head of equity research Jim Covello has been asking publicly: "What trillion-dollar problem will AI solve?" He warned: "Overbuilding things the world doesn't have use for, or is not ready for, typically ends badly." A National Bureau of Economic Research (NBER) paper surveying nearly 6,000 executives found over 80% of firms report no impact from AI on employment or productivity over the past three years. Sequoia Capital's David Cahn called it "AI's $600 billion question," noting the gap between AI spending and AI revenue "has not closed; it has widened."

OpenAI, the company driving a huge chunk of this demand, generated roughly $13 billion in 2025 revenue. Projected losses for 2026: $14 billion. They're seeking up to $100 billion in additional funding to cover cumulative losses expected to reach $115 billion through 2029.

Jamie Dimon at JPMorgan's February Investor Day: "Unfortunately, we did see this in '05, '06, '07, almost the same thing. The rising tide lifting all boats, everyone was making a lot of money, people leveraging to the hilt."

And the February jobs report landed yesterday (March 6th). The economy lost 92,000 jobs when economists expected a gain of 50,000. December was revised down from a gain to a loss. The economy has averaged essentially zero net job creation over the past six months, according to Indeed's Hiring Lab. So we've got the Shiller P/E at historic levels, AI contributing "basically zero" to GDP, and the labor market going sideways at best. That's the backdrop.

Nobody can predict the future. We could be wrong. But a lot of very wealthy people are acting like the music will never stop, and the rest of us are paying for the DJ.

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## SEGMENT 7: What you can actually do

If you need hardware, buy now. Everyone in the supply chain says the same thing. Kingston's Cameron Crandall: "My advice today would be to not hold off on that purchase because it will be more expensive 30 days from now, and more likely it will be more expensive 30 days after that."

Watch for shrinkflation. When shopping for laptops or phones, compare specs to last year's model at the same price point. You may be getting 8GB where you used to get 16GB. Read the spec sheet.

For self-hosters and homelab people: look at used enterprise RAM from decommissioned servers. DDR4 ECC DIMMs from decommissioned cloud hardware can still be found at reasonable prices if you know where to look. It's a rough time, but there are options.

When three companies control 95% of a resource and all three choose to serve the biggest buyer first, everyone else gets leftovers. The same dynamic that plays out with cloud dependence plays out with hardware. When the supply chain answers to shareholders before consumers, consumers get what's left.

**NOTE:** Plugging Chris N's blog post, *The Neuron Problem: Why AI's Trillion-Dollar Bet Is Built on Bad Biology*. It covers why the AI hype driving this shortage may be built on shakier technical ground than the industry wants to admit.

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- Tom's Hardware, "Don't wait if you're planning to upgrade your RAM or SSD, Kingston rep warns," Feb 2026: Cameron Crandall: "My advice today would be to not hold off on that purchase because it will be more expensive 30 days from now, and more likely it will be more expensive 30 days after that." — https://www.tomshardware.com/pc-components/ram/dont-wait-if-youre-planning-to-upgra

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# The Build Log

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## Chris N:

### What Am I Building?

So the project I've been pouring most of my dev time into is called subtoken-auth. Quick version of the problem it solves: if you self-host services like Nextcloud for your files or Jellyfin for your media library, you probably already use something like Authelia to handle logins. Single sign-on, two-factor auth, the whole deal. And that works great in a browser. Your browser knows how to follow redirects, handle login pages, all of that.

But a lot of these services have mobile apps. And those apps can't handle any of it. They don't know how to follow an SSO redirect. They don't support two-factor auth. They just want a username and a password, or a token, and that's it. So you're stuck either poking holes in your security to let the app through, or just not using the app at all.

Subtoken-auth fills that gap. You generate tokens with specific permissions and restrictions baked in: what services they can access, what devices they're allowed on, when they expire. And every single request gets validated against those rules. It's not public yet, but I hit a pretty big milestone with it this week, so let me tell you about that.

### JSON as a Database

Subtoken-auth sits behind a reverse proxy called Traefik. Think of Traefik like a bouncer at a nightclub. Every person who walks up to the door, the bouncer turns to my app and asks 'should I let this person in?' My app checks their token, basically their VIP pass, and says yes or no. Every single request that comes through hits my validation endpoint. Every page load, every API call, everything.

And for the longest time, I was storing all my token data, all the VIP passes and their permissions, in a JSON file. For anyone who isn't a developer: JSON is basically a text file with structured data in it. Great for passing information around. Absolutely not a database. Imagine you had a filing cabinet, but instead of folders and tabs, you just threw every piece of paper in there loose. Every time you needed to find something, you dumped the whole cabinet on the floor and sifted through it. That was my system. I was loading the entire file into memory, searching through it with hand-written logic, and flushing it back to disk whenever something changed.

And look, it worked. For months, it worked fine. But I was writing hundreds of lines of code to do things that a real database just gives you for free. Sorting, filtering, looking things up by multiple fields. All of it, reimplemented badly, on top of a text file.

## The Audit: Thousands of Lines That Didn't Need to Exist

Before I committed to a full rewrite, I ran a comprehensive audit of the entire codebase. Security, performance, code quality, everything. And the headline finding was this: I had written thousands of lines of code that didn't need to exist. Not because the code was wrong. It mostly worked. But because I was solving problems that already have well-established solutions. Hand-rolled caching logic. Custom search functions. My own data validation. All sitting on top of this JSON file.

The audit made it really clear that I needed to stop reinventing things and use the tools that already exist. So the rewrite moved to SQLite, which is a proper embedded database, same one that runs on basically every phone on the planet. And immediately, thousands of lines of custom code just evaporated. The database handles the querying, the indexing, the persistence. I write a SQL statement. I get my answer.

## Running Everything on a Laptop

The other thing I did very differently with the rewrite is testing. And not just unit tests, the basic checks where you test a single function in isolation, like 'does two plus two equal four.' Those are important, but they only catch certain kinds of bugs.

The thing I'm really proud of is the end-to-end setup. In production, there's a whole chain: Traefik is the bouncer, Authelia handles the login before you even get to the bouncer, and then my app validates the token. In most projects, you'd test your app by itself and just hope everything works when you plug it into the real chain. But that's exactly where the sneaky bugs live: in the gaps between systems.

So I built a fully local replica of the entire production stack. When I run my test script, it spins up the whole chain on my laptop. Same software, same configuration, same routing rules as production. Then a robot browser opens two separate sessions: one logged in as an admin, one as a regular user. It walks through the actual application the way a real person would. Clicking buttons, filling out forms, creating tokens, testing permissions. The whole thing tears itself down when it's done!

Close to 500 tests right now. All triggered by one script. When I ship code to production, I'm not crossing my fingers. I've already run it through the same gauntlet it's going to face in the real world.

## The End Goal? Your Phone as the Control Panel

All of this foundation work is building toward a specific experience. Subtoken-auth is built with SvelteKit on the frontend, and one of the things SvelteKit makes really easy is building a PWA, a Progressive Web App. You can install it on your phone's home screen and it looks and feels like a native app. No app store, no review process, no separate codebase for iOS and Android. Just a website that behaves like an app.

And the reason that matters is the workflow I'm building toward. Say you've given someone a token to access a service you're hosting. A request comes in from a new device, or from a country you've never seen before. Right now, the system can block that automatically based on the restrictions you've set. But what I want is better than that. I want your phone to buzz. A push notification: 'Someone is trying to use your token from a new location. Allow or deny?' And you just tap a button.

That's the goal. Real-time approval flows, right from your pocket. You shouldn't have to be sitting at a laptop staring at a dashboard to manage who has access to your stuff.

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## Chris V:

Discussion - An Unreal Engine environment, now (hopefully) with NPCs!

# The Plug / Outro

**Plugs:**

- **Chris N:** “Alive with Steve Burns” podcast episodes
    - Critical Thinking with Bill Nye: https://www.youtube.com/watch?v=oRHp2TL1KWk
    - Adam Savage on Critical Thinking and Truth in a Post-Truth World: https://www.youtube.com/watch?v=a1c8zQDQc64
    - My post: The Neuron Problem: Why AI's Trillion-Dollar Bet Is Built on Bad Biology. Covers why the AI hype driving this shortage may be built on shakier technical ground than the industry wants to admit.
- **Chris V:** *The Boondock Saints* (1999) - Wikipedia, IMDb

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We appreciate you being here. See you next week!