Much Ado About DeepSeek ...

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In this column, I try and make sense of the fear of China's DeepSeek model, as well as reiterate that we all become useless in 2026–2027, if we don't stop the machines.

In Zyda,[1] I pointed out that

> "... the field of computer science [is] pretty global, that our tech papers [are] published and available to anyone who [wants] them. Now they are all on the Internet, so the only thing that can really be blocked during Cold War 2.0 is specialized hardware to China and its surrogates ...."[1]

Not software—anyone can replicate software with the right B.S./M.S./Ph.D. in computer science. Also in Zyda:[1]

> "Software and the algorithms underneath cannot be blocked during a cold war. Especially since the country that sends the most graduate students to computer science and electrical engineering programs in the United States is China, with some departments in those fields being 80% to 85% PRC (People's Republic of China) nationals. The only way we can block this technology transfer is to provide permanent visas or citizenship to those students upon graduation so that they stay in the United States. We should do that for anyone from any country who has completed a Masters or Ph.D. in those fields."[1]

Or they will go home to China/wherever and build their own version of that software to great and brilliant acclaim.[8] And that acclaim comes, even if the new version is built on top of something that was previously open source like OpenAI.[9]

It is important to note that the title of this article is in homage to the Shakespeare play, *Much Ado About Nothing* (1598), where according to Wikipedia "*noting*, sounding like "nothing" and meaning gossip, rumor, overhearings)" is exactly the right sentiment for an explication of the DeepSeek state.[4]

Here is what we are going to be "nothing about" (Figure 1).

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DEEPSEEK R1: GOSSIP, RUMOR, OVERHEARINGS ...

Now, the gossip/rumor/overhearings about DeepSeek R1 in this next section are derived from a 30 January 2025 post on Linkedin by Steve Nouri, one of my favorite posters on Linkedin[5] and the DeepSeek FAQ.[2] I have turned Nouri's text into part of the mind map of Figure 1 and then added into the mix other gossip/rumor/overhearings and[2] to complete the "nothing."

In Nouri,[5] Nouri starts out by telling us that the previously unknown-to-us startup DeepSeek had just announced that they had "built a reasoning AI model that competes with OpenAI's best for 1/1000 the cost."[5] This normally wouldn't have caught anyone's attention *except* that it erased US$2 trillion in market cap on NASDAQ, US$500 billion of which was Nvidia's. All of the market lemmings assumed that since the Chinese startup had built it all for just US$6 million that we no longer needed much in the way of Nvidia hardware or much of the OpenAI request for US$500 billion to build their next model. Silicon Valley was streaming tears over this "nothing."

Nouri compared OpenAI's GPT-4 development cost of US$600 million plus training cost against the announcement from DeepSeek that their total cost was US$6 million; that OpenAI's model was not open source and that DeepSeek's model was open source and made from an earlier OpenAI model when it was still open source, according to Vinod Khosla on an X post on the 30 January 2025. So, the sky was falling in Silicon Valley bigly.

So, with DeepSeek saying that it was 27x cheaper than OpenAI's models and cheaper to build and cheaper to run, everyone wanted to hire consultants to ask them the crucial question, should they pull the plug on Silicon Valley's AI efforts or stand pat? Were our guys over here outsmarted by a Chinese development effort? Maybe it was time to stop the Cold War with China over tech transfer before we get locked out!!! DeepSeek is already on Amazon Web Services (AWS) and on Apple's iOS!!! And the sky is still falling!!!

SO, WHAT DID WE ALL FIND OUT?

Well, remember the title of this column is "Much ado about DeepSeek ...". I put out some feelers to friends inside of some of the largest AI companies in Silicon Valley and they all came back with "this is a whole lot of freaking out about nothing. The scaling laws have been predicting that this would be possible for years." So, that is somewhat of an obfuscation. But maybe the only

COMMENTS?

If you have comments about this article, or topics or references I should have cited or you want to rant back to me on why what I say is nonsense, I want to hear. Every time we finish one of these columns, and it goes to print, what I'm going to do is get it up online and maybe point to it at my Facebook (mikezyda) and my LinkedIn (mikezyda) pages so that I can receive comments from you. Maybe we'll react to some of those comments in future columns or online to enlighten you in real time! This is the "Games" column. You have a wonderful day.

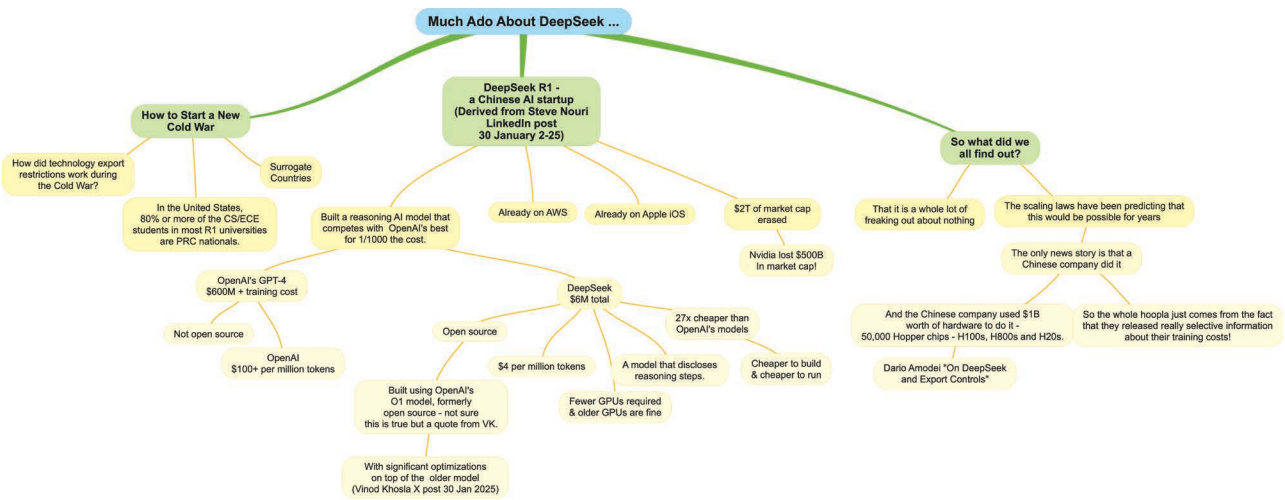

FIGURE 1. Much ado about DeepSeek ....

news story is that a Chinese company did it. As I started this column, I told you that that kind of software development was pretty likely seeing that we are educating Chinese students here in the United States and they are some of our best students!

There were some other things found out. According to Dario Amodei, DeepSeek did their work using US$1 billion worth of Nvidia hardware, some 50,000 Hopper chips, H100s, H800s, and H20s. Now these are older chips and run slower than the current generation of Nvidia hardware but that US$1 billion has to be added into the DeepSeek development costs.[3]

In Amodei,[3] there are some great summary comments by Amodei on this in his article entitled "On DeepSeek and Export Controls." The three crucial paragraphs are the following:

> "Thus, I think a fair statement is "DeepSeek produced a model close to the performance of U.S. models 7–10 months older, for a good deal less cost (but not anywhere near the ratios people have suggested)".
>
> R1, which is the model that was released last week and which triggered an explosion of public attention (including a ~17% decrease in Nvidia's stock price), is much less interesting from an innovation or engineering perspective than V3. It adds the second phase of training—reinforcement learning, described in #3 of Amodei[3] in the previous section—and essentially replicates what OpenAI has done with o1 (they appear to be at similar scale with similar results).
>
> These will perform better than the multibillion models they were previously planning to train—but they'll still spend multibillions. That number will continue going up, until we reach AI that is smarter than almost all humans at almost all things."[3]

The only way we can block this technology transfer is to provide permanent visas or citizenship to those students upon graduation so that they stay in the United States.

If you are going to use export controls in your title, you are reaching back to locking the barn door after the cows have escaped argument with respect to DeepSeek and Nvidia hardware. But Amodei comes back on this to my point:

> "The performance of DeepSeek does not mean the export controls failed. As I stated above, DeepSeek had a moderate-to-large number of chips, so it's not surprising that they were able to develop and then train a powerful model. They were not substantially more resource-constrained than U.S. AI companies, and the export controls were not the main factor causing them to "innovate." They are simply very talented engineers and show why China is a serious competitor to the US."[3]

Amodei and I agree that Chinese engineers, most likely trained in the United States, are great engineers and capable competitors. And they have 12 times the number of engineers we have in the United States, working at one third the cost of engineers here (my comment from my experience consulting in China[6]).

Yann LeCun, Chief AI Scientist at Meta said the following on Linkedin:[7]

> "To people who see the performance of DeepSeek and think: 'China is surpassing the U.S. in AI.' You are reading this wrong. The correct reading is: 'Open source models are surpassing proprietary ones.'"

So, it's all down to the issue of open source and why globally we all should have that for our critical AI systems, so that we can all just get along ….

WE ALL BECOME USELESS IN 2026–2027

There are some great and thoughtful things in Amodei's paper that I find amazing, this paragraph in particular:

> "Making AI that is smarter than almost all humans at almost all things will require millions of chips, tens of billions of dollars (at least), and is most likely to happen in 2026–2027. DeepSeek's releases don't change this, because they're roughly on the expected cost reduction curve that has always been factored into these calculations."[3]

So, we have rationale to continue to fund the development of these large models and their required large hardware, along with their nuclear power plants so they can run that hardware and its air conditioning and continue the warming of the earth (commentary).

So, in 2026–2027, we will have "AI that is smarter than almost all humans at almost all things." And we all become useless and the AI will write my columns while I swim. Is that a bleak or happy future? Depends on how much you like swimming.

ACKNOWLEDGMENT

The author wishes to thank those readers who have gotten to the end of this bimonthly column without finding all of the deliberate and accidental errors. And I apologize for my personal commentaries but I think they are very important for our futures. And I look forward to being less than fully useless in 2026–2027!

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