# SDS PODCAST

# EPISODE 974: WHEN WILL THE AI BUBBLE BURST? HOW BAD WILL IT BE?

Jon Krohn: 00:00 This is episode number 974 on how we're in an AI bubble. How concerned should we be? Welcome back to the SuperDataScience podcast. I'm your host, Jon Krohn. Today's topic is the AI bubble and why it might actually be a good thing. If you follow financial markets, you've probably noticed some jitters lately around AI stocks and frankly, the signs of frothiness are hard to miss. Here's an amusing one. Consider a startup called Cluely. Whose original product was an AI tool designed to help people cheat on Zoom job interviews. Cluely's tagline was literally cheat on everything. The founder of Cluely, a 21-year-old Columbia student named Roy Lee, got suspended from Columbia for using an earlier version of the tool to cheat on a technical interview with Amazon. Rather than lying low, he leaned into the controversy, raised over $5 million in seed funding, and then landed a $15 million series A round with Andresen Horowitz, one of the most prestigious venture capital firms in the world.

01:02 And then after the predictable backlash, clearly quietly dropped the cheat on everything branding and pivoted to being a more conventional AI meeting assistant competing with the tools like Fathom and Otter. Oh, and Roy, the CEO of Clearly later admitted publicly that the $7 million in annually recurring revenue, ARR he'd been touting, wasn't actually accurate. If that kind of thing doesn't scream bubble, I'm not sure what does. Beyond VC funding looking frothy, there's also the wild spending figures from more established AI companies that are hard for me to wrap my head around. OpenAI alone has committed roughly $1.4 trillion in infrastructure spending over the coming eight years. How much is $1.4 trillion? Cause that's kind of a hard number for me to imagine. That's a sum equal to about 1.2% of global economic output. To put that in perspective, during the dotcom era, telecom companies invested over $500 billion into fiber

optic cables across the US, which was roughly 1% of just US GDP over half a decade.

02:07 OpenAI's commitment eclipses that by quite a lot, by multiples, and that's just one company. Now, OpenAI has since tempered these figures somewhat, more recently telling investors it's now targeting around $600 billion in total compute spend by 2030, but all of these numbers are staggering for a company that generated just $13 billion in revenue last year. Meanwhile, on top of the VC funding and this huge amount of spend, individual AI researchers have reportedly been offered nine figures signing bonuses. So that's in the hundreds of millions of dollars. Most famously within Meta's so- called super intelligence labs. Seems safe to say we are firmly. In frothy territory, aren't we? This has got to be an AI bubble. So is this all a disaster waiting to happen? A fascinating perspective on this question comes from Byrne Hobart, an investor, the author of a well-known finance and tech newsletter called The Diff, as well as the co-author of a book called BOOM Bubbles and The End of Stagnation.

03:08 The book's central thesis is that financial bubbles, while often maligned as destructive and destabilizing forces, have actually been the engine of many of humanity's greatest breakthroughs from the Manhattan Project and the Apollo program to the semiconductor revolution. In other words, Hobart argues that bubbles decrease collective risk aversion and create the conditions for transformative innovation. The way that I came across Hobart was that he recently wrote an essay for The Economist, applying this framework that I just mentioned specifically to the AI boom. And his core argument is elegant. He says that the participants in a technology race are all building products that are economic compliments to one another. You need the turbines, the power of the grids, the power of the chips that run the models, the

power of the products, and you need companies to build their growth and hiring plans around the expectation that ever more of their work will be done by AI.

04:00 If any one of those layers decides it's spent enough, the other layers risk becoming stranded assets. Again, big layers like you need turbines to power the grids, to power the chips, to run the models to power the products. But when asset prices are loudly signaling that the technology is real and the economics will be compelling, that encourages the complimentary investments that actually make the whole ecosystem work. It's a kind of self-fulfilling prophecy, but a productive one. There's strong historical precedent for this. During the dotcom bubble of the late 1990s, telecom companies poured enormous sums into laying fiber optic cable. Over 80 million miles of fiber optic cable crisscrossed the US during the 1990s. Most of those companies went bankrupt, names like WorldCom, Global Crossing, and 360 Networks are cautionary tales. But by 2004, all that excess fiber had driven the cost of bandwidth down by more than 90%.

04:55 Even four years after the bubble burst, roughly 85% of broadband capacity in the US was still going unused. And that dirt cheap abundant bandwidth is precisely what made YouTube Netflix cloud computing and eventually the modern AI ecosystem possible. The investors lost their shirts, but the rest of us got an infrastructure gift that keeps on giving. Go back even further and you see the same pattern. Britain's railway mania of the 1840s was catastrophic for the original investors. By some estimates, railway investment consumed nearly 7% of Britain's national income at its peak. The bust when it came ruined middle-class families across the country, and yet the rail network, those speculators built, became the backbone of the industrial revolution. In another example, the car industry's growth implicitly subsidized

oil exploration and vice versa. Electrification followed a similar path. Appliance manufacturers had to operate on the assumption that utilities would wire up more households and those utilities had to bet that once power was available, companies like General Electric and RCA would give people something to plug in.

06:01 Hobart, in addition to making the case pretty compelling that we're in an AI bubble and that that actually could be a good thing for society. If you think about, for example, a minute ago, I was talking about how all that excess broadband brought down the prices of bandwidth down by more than 90%. You could now imagine a scenario where all this investment goes into compute infrastructure, and even if there is a bust, compute will be super cheap for AI, powering tons of powerful apps cheaply. So that's where we could be going. But in addition to him making the case about it potentially being a good thing, if the AI bubble bursts, he also makes great points in his piece in The Economist about timing. Morning signs of a bubble aren't necessarily signs that it's time to sell because they precede the peak of the mania by an unpredictable amount.

06:53 Here's some interesting examples. He noted that media coverage described dot com trading as nutty as far back as the summer of 1995, around the time of the Netscape IPO, when a Wall Street Journal article quoted an investor saying he didn't really know anything about the company he was buying. And yet, even at the NASDAQ's post-crash low in 2002, it was still 40% higher than in 1995. So even though in 1995, it seemed like there was this bubble, this. Com bubble. If you had invested in 1995 in 2002, well after the crash and at the absolute low point for NASDAQ post-crash low, it was still 40% higher than in 1995. So the same kind of thing happened in mortgage markets as well. There was a well-argued essay

titled A Home Without Equity is just a rental with debt, and that warned about a housing collapse in June 2001.

07:55 Even at the actual post-crisis low, a full decade later, the K-shiller index of American house prices was still 18% above the level that it was when the essay was published. So anyone who read those cogent arguments and acted on them would've been worse off for doing so. So even if we are in an AI bubble today, you still might be better off owning AI stocks now. Even if there is a crash, you still don't know how long. It could be years and years and years of this bubble growing much more by the time the crash happens, it's still ahead of where we are today. There's a famous dictum often attributed to John Maynard Keynes, one of the most important economists of the 20th century. He said that markets ... Well, he supposedly said that markets can remain irrational longer than you can remain solvent. People love to say that quote.

08:42 But Hobart, the guy I've been talking about most throughout this episode, argues it's more in the spirit of Keen's to say that economic growth is partly a matter of believing that it will happen. Recessions end when people and companies start to spend as if they're over and booms persist when some participants are building the infrastructure that others need to make that boom happen. When OpenAI announces a splashy new scale up or Meta declares yet another increase in planned capital expenditures, they're signaling to AI users, coders, lawyers, writers, whoever's using AI, that they'd better be prepared for smarter models. The more people and organizations gear their behavior toward a world in which AI is even more powerful, the more that we are locking in the demand that justifies all of those eye popping expenditures. None of this means that everyone investing in AI today is going to come out ahead.

09:34 Plenty won't, but the broader point is that bubbles, painful as they are for many participants, tend to leave behind infrastructure that the rest of us benefit from for decades. The data are clear on this across multiple technological revolutions. If the AI bubble does burst, the compute infrastructure, the talent pipelines, and the model architectures being built right now aren't going to disappear. They'll become cheap, abundant foundation for the next wave of applications, ones we can't probably even imagine today. Now, I mentioned talent there, and so if you're listening to this show, there's a good chance you're a hands-on AI practitioner, a data scientist, an ML engineer, an AI researcher, and so you might be wondering what a burst would mean for you personally for your job. History suggests that when bubbles pop, the first casualties on the talent side are roles of companies that were never building anything real, followed by a wave of belt tightening at more legitimate firms.

10:27 During the dotcom bust, even strong tech companies laid off engineers and froze hiring for a couple of years. If something similar plays out in AI, the people who are most insulated tend to be the ones with deep transferable technical skills rather than narrow expertise in one particular framework or one company's proprietary tooling. If you can train a model, fine tune it, deploy it efficiently and critically, connect what you're building to measurable business value, you're in a much stronger position than someone whose primary skill is orchestrating API calls to a single vendor's model. What can you do right now to prepare for an AI bubble bursting at some point? There's a few things. First, diversify your skillset, just like I was saying. If you've been living entirely in the world of prompt engineering or building wrappers around foundation models, consider going deeper into fundamentals like model architecture, optimization and evaluation.

11:13 These are skills that remain valuable regardless of which companies or platforms survive a shakeout. Second, I'm obviously not a financial advisor, so please take this guidance with a grain of salt and maybe actually talk to a professional advisor, but I'd recommend building a financial cushion of cash or other easily liquidatable holdings if you can. Bubbles can create a lot of paper wealth and inflated compensation packages. Don't let lifestyle inflation eat all of that. And third, invest in your network and your reputation within the community when hiring freezes thaw. The people who get snapped up first are the ones other practitioners already know and respect. The AI industry isn't going away if there's a correction. It's just going to get leaner and more focused on real demonstrated value. And frankly, that's an environment where strong technical practitioners tend to thrive. All right. So were you worried about an AI bubble bursting before this podcast episode?

12:05 If you were, hopefully you'll now be convinced that even if it does burst, the economy and society at large will long-term benefit from all the investment, even if some individual investors lose their shirts. And for you personally, you can be prepared for the bubble bursting if and when it does happen. All right. If you enjoyed today's episode or know someone who might consider sharing this episode with them, leave a review of the show on your favorite podcasting platform, tag me in a LinkedIn post or LinkedIn comment with your thoughts, I'll be sure to respond to any of those. And if you haven't already, obviously subscribe to the show. Most importantly, however, we hope you'll just keep on listening. Until next time, keep on rocking it out there and I'm looking forward to enjoying another round of the SuperDataScience Podcast with you very soon.