

**SDS PODCAST
EPISODE 646
FIVE MINUTE
FRIDAY:
CHATGPT: HOW TO
EXTRACT
COMMERCIAL
VALUE TODAY**



Jon Krohn: 00:00 This is episode number 646 with Zack Weinberg on how to extract commercial value from ChatGPT today.

00:14 For today's episode, my longtime friend Zack Weinberg, a brewer and owner of a homebrew supply store, joins me to provide ideas and actionable guidance on how anyone, whether you have a technical background or not, can this very day extract tons of commercial value from the ChatGPT interface that has taken the world by storm in recent months. Let's jump right into our conversation.

00:42 Zack Weinberg, welcome to the SuperDataScience Podcast. What a treat to have you here, man. Where in the world were you calling in from?

Zack Weinberg: 00:50 Jon, pleasure to be here. I'm here at my shop in Toronto, Ontario, at my homebrew supply store.

Jon Krohn: 00:58 Nice. Ontario, that's some kind of Canada thing.

Zack Weinberg: 01:02 Yeah, it's a country in Canada.

Jon Krohn: 01:07 So we've known each other for 20 years. We just did the math. So we'd met in 2003 in my first year of chemistry lab.

Zack Weinberg: 01:18 Nice. Happy to hear chemistry lab.

Jon Krohn: 01:24 And we got talking recently about ChatGPT. You are frequently sending me messages about the latest and greatest things in AI as a kind of citizen user of these tools, which in 2022 there were these explosions of these different kinds of tools in different kinds of modalities. So you're sending me lots of fun examples of images that you'd created with DALL·E 2, for example. And more recently you'd been sending me incredible conversations that you'd been having with ChatGPT, and recently we were in-person having a conversation and not only were

you sharing with me very funny ChatGPT outputs, which we'll get to later in the show, but you also were talking about practical commercial ways that you were using this tool. And so for background for our listeners, the reason why I thought that this would be a really interesting podcast episode, we often have guests come on the show who are expert data scientists, and they've come up with a new way of developing a model. They can do some new thing or applying some model in some new way.

Zack Weinberg:	02:36	Not today.
Jon Krohn:	02:36	Not today. So, Zack, have you ever written a line of code?
Zack Weinberg:	02:43	Oh, yeah, yeah. I used to make my own websites on Angelfire, and GeoCities, and-
Jon Krohn:	02:48	Oh, there you go.
Zack Weinberg:	02:49	I know basic HTML. I did Turing in high school and I know some basic stuff. I know some stuff, but I am grateful and humbled to be here as probably the least qualified person to ever appear on the podcast. So thank you for having me.
Jon Krohn:	03:07	Well, that's perfect because that's kind of the point of having you here.
Zack Weinberg:	03:11	I'm Joe Six-Pack. I'm like your average Joe Six-Pack, and I'm here to share what the average guy, what has been disseminated down to me from the great gods of AI and ChatGPT what I know now.
Jon Krohn:	03:26	You're also, you're selling yourself a little bit short at least because you do run a big business that is mostly digital. You do have a physical store. So if people are watching the YouTube version of this episode, you can actually see a really beautiful setup that you created for filming today,

Zack, in one of your homebrew supply stores, physical stores. But mostly your business is online, and so you spend a lot of time with digital websites, and with digital advertising, and that kind of thing. And so with the advent of the mind-blowing ChatGPT outputs late 2022, you had some ideas for how you could be driving real commercial value immediately with that tool. Do you want to tell us about some of those?

- Zack Weinberg: 04:12 Yeah, for sure. So like Jon said, my business is Toronto Brewing, torontobrewing.ca. If you're interested in homebrewing, I am your guy, and if you're in America, we've got floridabrewing.com.
- Jon Krohn: 04:26 All right, all right, all right.
- Zack Weinberg: 04:27 Yeah, but it's super interesting as an e-commerce store owner because there are so many things that I think are going to change quite quickly with ChatGPT, and you're seeing things like customer service. If you had multiple people doing in-person customer service, you're going to have chatbots and very intelligent conversation and customer service being able to be provided, use all of my existing customer service chats in Gmail or in this program to base your future customer service conversations on. And then you may eliminate many people from providing in-person customer service. Things like our product descriptions, you always want to have features, benefits, three features and three benefits. Now, you can just ask GPT that basically-
- Jon Krohn: 05:19 And that's literally what you've already been doing, right? You've been doing that kind of thing. Was it you that was telling me about you had ideas like stretching back years of blog posts that you wanted to write?
- Zack Weinberg: 05:34 Yeah. So you are great at creating content. I have many ideas, but I just didn't take the time. What are five

reasons why your beer tastes bad? Or what are five hops you need to know about? What are five easy ways to do this? What's the difference between brewing and glass or plastic? And now ChatGPT can just create five paragraphs, or a Twitter post, or whatever format you want a song and a voice of Snoop Dogg about hops.

- Jon Krohn: 06:08 Right.
- Zack Weinberg: 06:09 So it's incredible.
- Jon Krohn: 06:11 Yeah, hops are one of the key ingredients in beer for those of our listeners who aren't aware and very important for getting the flavor that you want, if you want to learn more about that, just ask your local ChatGPT browser and make sure that you get it sung to you by Snoop Dogg. So yeah, perfect. So this is exactly what I wanted to accomplish with this episode, with this relatively short, it's not actually going to be just five minutes on this Five-Minute Friday. I think whenever we bring in a guest like this on a Friday and ends up being a bit longer than five minutes. But this was exactly what I wanted to accomplish was to be able to show to our listeners whether you're technical or not, there are things that you can be doing to generate content with ChatGPT out of the box today that can be creating real commercial value for you.
- 07:00 And you can be doing that without having to write a line of code, without necessarily any experience as a data scientist or any kind of a relevant occupation like that. So already kind of mission accomplished in terms of the episode, but I also thought this would be a great opportunity to just share some fun examples beyond just commercially viable ones. So we already did an episode, episode number 638 of this podcast was written by ChatGPT. And I tell you that at the onset of the episode, maybe someday in the future I'll be doing it, you won't

even know. It hasn't happened yet. But episode number 638 was a year-end holiday greeting. I asked ChatGPT to create it, I gave it the parameters. I said, "Your name is Jon Krohn, you host a podcast called SuperDataScience. Write a year-end holiday greeting." And it did it perfectly. First shot just copied and pasted it into a script and I read it on air.

- Zack Weinberg: 08:02 It's incredible.
- Jon Krohn: 08:03 Yeah. So, Zack, do you have some funny ChatGPT conversations that you had?
- Zack Weinberg: 08:12 I do. I do. Here's one that we shared the other night over a few beers. It's really incredible that I think this is really a turning point or really a wild time in history that we're witnessing where AI is able to understand the nuances of comedy and combine them with finance or brewing and produce multiple paragraphs or pages of completely coherent text. That's A minus work as some university professors say like it produced A minus work right away. And as we discussed at the beginning of the podcast, I was never really an A minus student in the first place. So this is really incredible. And to tangent, you guys often talk about on the podcast, artificial general intelligence, and will we get there? What do you think we're like A minus there, like 80% of the way there. How close do you think we are?
- Jon Krohn: 09:19 So the best episode that we've had on that is episode number 565 with Jeremie Harris. I think it's about two hours long. It's one of my favorite conversations that I've had in my life. Actually, I can't remember if I mentioned this on air during the filming of that episode or not, but Jeremie and I talked for two hours before we started recording, then we recorded a two-hour-long episode and then immediately went and talked for another two hours off air. So he's a fascinating guy and he is very concerned

about AGI, Artificial General Intelligence, a algorithm that has the same learning capacity as an individual human. He is concerned about that happening in the coming years and it having very negative consequences for mankind potentially. There's potentially very big risks. So that's a great episode to listen to get the kind of general lay of the land there.

10:18 This development of ChatGPT has made my relative skepticism about AGI happening. I don't think it could happen in the coming years. Maybe it could happen in the coming decades. The big gap that we don't currently have any viable solutions for is that these systems don't have an appreciation for cause and effect. So they are only capable of correlation, and they do amazing things with that, but they are taking in a sequence of words as input, a sequence of characters as inputs. In the case of this ChatGPT model, the input is natural language characters, and then that information flows through a neural network, a weights and biases model parameters and an output comes out the other end. There's no point within that process where there's the kind of cognition that humans do, or that puppies do, or infants do, where they can take one example of something having had happened and make inferences draw conclusions from that.

11:45 So there's this lack of cause and effect that deep neural networks as we've conceived of them today, don't handle. And all of the big advancements in AI in the last decade or two have been as a result of these neural networks that are purely, one directional... So there's hurdles to overcome I think towards having the kind of reasoning that humans have. But these machines, just as a calculator has for decades been able to do things that we can't, so too can ChatGPT. Okay, so it can't reason like a person, but it can in seconds create a rap in a style of Snoop Dogg about hops and introduce the concepts of

brewing to people. There's not many people, maybe Snoop Dogg can do that, and maybe a few other people on the planet, we have this algorithm that can do that and then you can say, "Okay, now do it in a screenplay in the style of Larry David." And it can do that too.

12:57 And so it has so much knowledge and so many different styles that it can imitate effectively an infinite amount when you think about different variations, when you're like, "Give me a Larry David style script with Snoop Dogg in it." Yeah, there's an infinite amount of variation there, right? So I guess I'm off on a big tangent here. So one, I think that there potentially are concerns that we need to have with AGI in our lifetimes. Two, I don't think that the exact path that we're on now, which primarily just involves adding more model parameters is going to give us intelligence that is exactly like ours. But the third big thing is that we will still end up creating models that are capable of incredible things, things that we can't do as humans. We don't need to worry about why replicate exactly human intelligence. We can be having different kinds of capabilities. And that's exactly what we see with ChatGPT.

Zack Weinberg: 14:02 For sure. For sure. And to go back to your reasoning thing that it doesn't have necessarily reasoning or cause and effect, this chat thing does. I asked it who would win in a fight, llama or an emu, and it was like, "You should not fight animals, first of all, you should never fight animals, but the llama is substantially larger than an emu."

Jon Krohn: 14:33 Yeah. So also, there are lots of examples of it giving outputs that are nonsense when you ask it things like that. So it doesn't... Because it is just probabilities of it's predicting what character would make sense next or what word would make sense next in a sequence based on what's already happened in the conversation. There are

lots of highly probable words that don't make any sense and that sometimes it outputs, but it will output that very confidently. So for example, a listener at home, based on the advice that we gave it in this episode, could go to ChatGPT and ask what's involved in brewing beer. And it might very confidently give you an answer that has big inaccuracies and there's no way to know that as the reader unless you are already a beer brewing expert.

- Zack Weinberg: 15:29 Yeah. I think you get to see A minus work though, and I think whether it's writing some Python or it's asking you to make a beer recipe or a blog, it gets you A minus work, which is close enough. So to go back to the artificial general intelligence thing, are we 80% of the way there? And if we are, isn't that close enough? I think it's already so close that we're able to push it to do the things that we need that I'm only like 75% self-aware. So this is like 80%, this is even better than I [inaudible 00:16:08]-
- Jon Krohn: 16:07 Well, and then you just use the term self-aware, which is another thing that I certainly don't think machines have any more than a calculator has. But to give you an example of how in some circumstances it is giving much worse than A minus results. So Ken Jee, who was a guest on this show in episode number 555, brilliant data scientist and content creator, super popular on YouTube. I made a LinkedIn post just before recording this episode where I said, "I'm filming a podcast episode that highlights the most mind-blowing ChatGPT output conversations, what are the coolest dialogues you've elicited or seen others elicit?" And Ken Jee commented that he asked ChatGPT if a hotdog was a sandwich and it gave the wrong answer. And so that's much worse than A minus.
- Zack Weinberg: 17:00 What was the wrong answer? It was?
- Jon Krohn: 17:04 Well, no, a hotdog is a sandwich.

Zack Weinberg:	17:06	No, it's not.
Jon Krohn:	17:11	All right. All right. So I guess it's more debatable than I thought as to whether a hotdog is a sandwich or not. So maybe that is not a great example of it having low-quality sub-A minus work. But back to specific examples. We've gone on off on a number of tangents after tangents after tangents. You were going to have I think a comedy output that you'd had from ChatGPT that was particularly good.
Zack Weinberg:	17:41	Absolutely. So I can pull it up here. One that we were laughing at the other night, we were talking about the global recession as you do on a nice Saturday night. And I had asked, "Can you please..." I do ask chat. I do say please, I don't know, it's because maybe-
Jon Krohn:	17:58	I do that too. Yeah.
Zack Weinberg:	17:59	I always say please.
Jon Krohn:	18:00	It's a Canadian thing, I'm sure.
Zack Weinberg:	18:03	"Can you please create a short comedy sketch about the global recession in the style of Larry David?" "Sure. Here's a short comedy sketch about the global recession, the style of Larry David." Scene, a bustling city street, people are rushing to and fro. Larry, wearing a wrinkled suit and carrying a briefcase. "Hey, did you hear about the global recession?" Cheryl, wearing a designer outfit and carrying a designer handbag. "Yeah, it's terrible." Larry, "Terrible. I'm loving it." Cheryl, "Really? How come? Because now I can finally afford to buy a house in Beverly Hills."
Jon Krohn:	18:42	Yeah. So that blew my mind when you first read that to me. I hadn't been trying any comedy at that point, and it's that context. It's Larry in the rain with a wrinkled suit giving this, it's a really subtle sense of how to have some poetry around the idea of describing a global recession in

a script. So yeah, that kind of nuance and the ability to nail comedy has really, really surprised me.

- Zack Weinberg: 19:17 Yeah. I tried asking it as I was leaving my girlfriend Natasha, she hit me with a one-liner. And so I quickly asked Chat to come up with five yo Mama jokes, and it said, it wouldn't let me come up with anything that would hurt someone's feelings or something along those lines. I'm like, "zoot." And then I left burned.
- Jon Krohn: 19:45 A zoot is... I don't know how offensive that is in French. Do we need to bleep that out as long as we don't mention any parts of the church, which Quebec is very violent curse words. Yeah, so that touches on the point that I know we've talked about separately, and that is worth mentioning on air that there are guardrails that have been set up by OpenAI, the developers of ChatGPT, but it's a matter of months before organizations other than OpenAI are providing access to similar kinds of functionality where those guardrails aren't in place and where-
- Zack Weinberg: 20:28 Yeah.
- Jon Krohn: 20:28 Yeah.
- Zack Weinberg: 20:30 Yeah. One really cool thing along those lines of getting the... If it can get the nuance of comedy and rap, it can understand biological processes and bio transformation, things like that. So a while back some people had used the process of fermentation, which we use for homebrewing and brewing or making alcohol, which is, you take carbohydrates in the form of simple sugars and convert them into carbon dioxide and alcohol. And there are a number of other byproducts like Esters, and Phenols, and things like that. And one, I think PhD group coax the process in yeast into producing THC as a byproduct. So maybe it can link up with a biotech

company and you can say something like, "Can you use the process of fermentation as a basis to convert polyethylene plastics into perfectly harmless bio byproducts?"

- Jon Krohn: 21:41 Right. So yeah, at this time I think it's somewhat constrained. It's an interesting thing. What I was about to say is that its creativity is somewhat constrained by what already exists out there, but then kind of the Larry David and the rain thing seems to see as-
- Zack Weinberg: 22:02 The raw jokes.
- Jon Krohn: 22:03 Yeah. Yeah. It's like the subtle context there. Yeah. So there are very, I guess, scary going back to the AGI idea and Jeremie Harris in episode number 565, we don't need to have AGI, an algorithm that's capable of learning as broadly as human to have very powerful AI tools that are wreaking havoc.
- Zack Weinberg: 22:38 It's already here, it's already close enough as I'm looking at it to fall into the wrong hands. Any Indiana Jones movie or any one of these movies, there is this all omniscient, omnipotent object that provided you with these powers and a mere mortal with their brain would crumble under the pressure, their body would fall apart under the stress of this. And even just when you actually think about it, you kind of stumble, you get paralyzed by the potential of it just because it's quite overwhelming to think what it's capable of even now, and it's really only limited to our imagination.
- 23:20 And how far could you go with it? How far could it go itself if you let it? I'm just Zack from Toronto Brewing. I'm just a homebrewer, and if I can think of things like this, what could someone who's actually studied in a field where this is that thing that takes it to the next level? It stops procrastination, it gets you A minus work to the

next level, to the next level. And it'll go both ways. It'll be used for good and bad and hopefully we can use it for tremendous good, like getting rid of plastics, let's convert plastic to alcohol, something like that.

- Jon Krohn: 24:04 Yeah. Really great points. I don't have answers to all those questions. I think maybe nobody does. We don't know where these things are going. I do know that today I don't have tips for people who want to do really nefarious things.
- Zack Weinberg: 24:19 Of course not. Of course not.
- Jon Krohn: 24:20 But I will, in the show notes for this episode, I will provide links to posts by my friends Allie Miller and Sadie St. Lawrence. Sadie's been on the show a whole bunch of times, including for our data science trends episode that kicked off the year number 641. And both Allie and Sadie have put together great posts summarizing more practical things that you can do with ChatGPT right now. So I'll be sure to put those in the show notes. So similar to the kinds of examples that Zack was giving, you can be generating marketing copy, you can be generating blog posts and just don't do it nefariously if you heard about it on the show, come on, scouts honor.
- 25:03 Another really cool example that I have here from the social media post that I made asking about people with really cool examples. We have one here from Danny Richmond. So this specifically, it was brought up by Julia McDonald. She posted it as a comment on LinkedIn to my post asking for tips for this episode. And she had this really cool... It's GPT-3 powered in this case. So not ChatGPT, but the ChatGPT interface relies on these GPT language models in the background.
- 25:42 And actually we have tons of GPT specific content for you from one of the first authors of the original GPT-3 paper.

That's Melanie Subbiah. So she's in episode number 559 of this show detailing the kinds of language models that are working in behind the ChatGPT interface. Anyway, so this guy, Dannie Richmond, he used GPT-3 with his Gmail account to take very simple original text that he provides and convert that into something that's business appropriate. So he writes, Sally, I am starts work at yours Monday from Dave. That's the original text that goes in, and GPT-3 converts that to "Dear Sally, I hope this email finds you well. I'm ready to let you know that I'll be starting work with you on Monday. I am really looking forward to getting started. If you have any questions or need help with anything, please don't hesitate to get in touch. Best wishes, Dave".

- Zack Weinberg: 26:40 Wow. That's amazing.
- Jon Krohn: 26:43 That's a cool productivity thing there.
- Zack Weinberg: 26:47 Yeah, I imagine it could go through your whole website, find any product description that doesn't have three features and three benefits, and it automatically proposes it, puts it in there. Any customer service email, no more grammatical errors.
- Jon Krohn: 27:02 Right.
- Zack Weinberg: 27:04 It's really incredible.
- Jon Krohn: 27:05 Yeah. But potentially the risk of it at this time, I think you always want to be reviewing it before it goes out probably because of this risk that we're seeing of it being very confidently introducing errors. So yeah, so lots of fun stuff. Potentially it's going to destroy all of humankind, but for now you can create some great marketing copy. I'll be sure to include a link in the show notes to the LinkedIn and Twitter posts that I made asking for people's top prompts and results that they'd seen with ChatGPT.

There's lots of fun stuff in there like Kramer on Seinfeld pitching a crypto exchange. There's, somebody asked ChatGPT to write a biblical verse in the style of the King James Bible explaining how to remove a peanut butter sandwich from a VCR and it's hilarious.

28:03 So yeah, that kind of thing. We've got an entire paper that was written by ChatGPT... Sorry, an entire book that was essentially written by ChatGPT. So all those links will be sure to include the post that has all of those different examples in the show notes. And one thing that we haven't even touched on yet in this episode that is really relevant to our technical listeners out there, especially those listeners that are just getting started with a data science career or with a software development career, is that ChatGPT can write code, and they can do it in lots of different languages and can do it very well. So one final example that I have is Douglas McLean, who's a lead data scientist at Tesco Bank. He says that he used ChatGPT to write Python code to hedge the interest rate risk in a swap portfolio, and then he asked it to do it all again in Spanish. So there's an enormous amount of potential beyond just generating natural language, but generating code as well.

Zack Weinberg: 29:09 Can I give a free idea to your listeners?

Jon Krohn: 29:13 Absolutely.

Zack Weinberg: 29:15 So in the homebrewing world, there is a national homebrewers' competition every year. And all of the winning homebrews, their recipes are published online. So there is a database with all of the winning homebrew recipes from the past 10 years. You could get Chat to write a script that uses this data to correlate with someone's existing pantry of ingredients to create an award-winning recipe based off of all this database of the winning these recipes, and you can charge people for it.



- Jon Krohn: 29:49 Yeah, I really like how you phrased that as something for your listeners, but that sounds like a really great idea, particularly for you.
- Zack Weinberg: 29:57 Yeah, maybe I should do it, but I challenge someone to beat me to it and all the ideas are really there and Chat could probably come up with more ideas for you. So it's really a crazy world where ideas are free, and plentiful, and novel because of Chat. And it's really a renaissance in learning. How do you teach a kid? It's not like, "Hey, Miss, I'll have a calculator when I'm older. It's like I not only have the sum of human knowledge at my fingertips, but I have artificial intelligence there to organize it without any delay or procrastination." So it's really a glorious time for anyone who's ready to focus on Chat and realize what it is and how to harness the power. Those people will really be able to take things to the next level. It's 1994 internet, you're going to be able to do things really quickly that have never been done before, so it's super exciting time.
- Jon Krohn: 30:57 ChatGPT, how can I advance my data science career? And then it can give you ideas, and then you can provide more context. Like, "Hey, your idea one is perfect, but actually I have more years of experience than that, or I have this particular specialization." And you can do that for anything. It's not like just data science careers. It's like, "Hey, ChatGPT, how can I increase revenue in my business? How can I make my business profitable?" And you can have a conversation about it. And there's also these things about I found, I saw a really funny tweet that somebody was like, men won't go to therapy, but they will have conversations with ChatGPT about their feelings.
- Zack Weinberg: 31:35 There was a guy who made a program to analyze his journal and give him feedback and things that a female tweeted the next day, men will literally create a whole program, [inaudible 00:300:41:52]. Absolutely incredible

and true. Yeah, but pitch decks, business plans, brewing business plans, anything you want. And because it's chat, you can say, "Elaborate on this marketing part, or what is a novel way to approach this? Or write this in the style of Peter Teal or something like that." And you have it all. It really gets you A minus work really, really close, which it's a glorious time to be an entrepreneur, or an e-commerce homebrew shop owner, or a programmer. You don't have to Google, "How do I do this", and find a blog on how to write this script. It just does it for you. And it gets you super close, so it's a glorious time to be in both of our fields and excited to see what happens next.

Jon Krohn:	32:40	Yeah, maybe in any field.
Zack Weinberg:	32:42	This calls for a Bud Light.
Jon Krohn:	32:47	Zack, it's been fun having you on the show today talking about immediate commercial value that anyone can derive from AI today, specifically from ChatGPT. Thanks so much for being on the show and having a laugh with us. Is there any way that people should follow you or get in touch with you after the episode if they have questions? Yeah,
Zack Weinberg:	33:09	You can follow me at Toronto Brewing. Let me know if you have any questions or want to brew your own beer. Jon, I'm truly grateful and humbled to be on this podcast. Thank you so much for having me, and have a great weekend.
Jon Krohn:	33:23	My pleasure, man. It's been great. Yeah, and that's great. This is a Five-Minute Friday episode. I've never thought to wish people a great weekend at the end of it.
Zack Weinberg:	33:31	Have a great weekend.
Jon Krohn:	33:33	Did you ask ChatGPT about that? All right. All right.



Zack Weinberg:	33:38	Cheers, Jon.
Jon Krohn:	33:39	All right. Hope you enjoyed this special Friday guest episode with Zack Weinberg on extracting commercial value from ChatGPT today, regardless of your level of technical data science expertise. Until next time, keep on rocking it out there folks, and I'm looking forward to enjoying another round of the SuperDataScience Podcast with you very soon.