Alex Lieberman:
What's up, everyone? I'm Alex Lieberman, Co-Founder and Executive Chairman of Morning Brew. Welcome to season four of Fresh Invest, the podcast where we explore all things in investing, sponsored by Fidelity Investments and powered by Morning Brew. In this season, we are exploring strategies and tips to help you invest wisely wherever you are in life. With help from our friends at Fidelity, we'll dive into the investing lifecycle in the context of today's market landscape, emerging trends, and long-term wealth building strategies. Let's get into it.

In our last episode, we dug into the ways that AI is impacting businesses and the economy, and what this means for investors. But AI is a pretty big topic and there's lots to cover. So, welcome to part two of the conversation where we're diving deeper into AI's relationship with investing, how it's transforming the global investing experience, and how AI-based tools can be leveraged in the financial services space. To answer all of these questions and understand the potential changes that investors and the financial space as a whole can explore with AI in their toolkit, we're joined by Sarah Hoffman, VP of AI and Machine Learning Research at Fidelity. Sarah, welcome to the podcast.

Sarah Hoffman:
Thank you so much for having me here.

Alex Lieberman:
Well, before we dive into what's going to be an awesome conversation about AI, mind just introducing yourself and what you do at Fidelity?

Sarah Hoffman:
Sure. I lead AI research for Fidelity Center for Applied Technology, our innovation department. So, I really focus on what's coming over the next couple of years and how can we prepare.

Alex Lieberman:
And can you give us an overview of the kind of AI and ML or machine learning research that you lead at Fidelity, and specifically what excites you most about the research that you're doing right now?

Sarah Hoffman:
So definitely for the last couple of years, I've been focusing a lot on generative AI and how that can impact the world and financial services as well.
And so, can you just talk about what generative AI is, and what are the primary advantages to this technology?

Sarah Hoffman:
Sure. So generative AI is really... I mean, AI makes predictions and generative AI is creating something. So this is very different than what we've seen before, because it'll create text, it'll create code, it'll create images. What excites me about this technology is, I mean, really three things. Firstly, efficiency is always why I was excited about AI for many, many years. And this takes efficiency and really adds a lot more to it. So if you think about, "Okay, I could get a draft written now. So, that's definitely making things more efficient for me."

But the other area that AI never really did well before, and also I would say we never thought AI could do well at all, is creativity. So, I can ask you to write that draft and make it very creative. I could brainstorm with it about a topic I'm thinking about.

Alex Lieberman:
Or my sister's draft for her wedding speech for me.

Sarah Hoffman:
Exactly. And so, this is something we never would've expected AI to be able to do.

And then the last area that also really excites me is education. Right now when I'm in a meeting and somebody mentioned something and I'm not familiar with it, I might ask one time, "Can you explain that to me?" But if I still didn't understand it, I probably won't ask a second time, but I do go to generative AI and ask again and again, until I understand. I can ask, "Can you explain it to me as though I'm a college student? Can you explain it to me as though I'm a fourth grader?" And I can ask again and again, and until I get the answer that makes sense to me. And you can't do that with a human. Most of us are afraid of being judged and you don't have that with AI.

Alex Lieberman:
Yeah. It's like after the first or second question you ask to someone, you have that fear that you're going to come off as stupid. Like you're wondering, "Is this person going to be wondering why is this person asking so many questions?" But to your point, with AI, it's like a lot of well-known investors or entrepreneurs are known for being great first principles thinkers. And a great way to get to first principles is by asking lots of questions. And you have the ability to do this with something like ChatGPT or different AI based tools now, which is awesome. Can you talk about specifically this intersection between AI and investing, and how we're seeing in practice actual investing tools that investors are using that are made better or supported through AI technology?

Sarah Hoffman:
Sure. I mean, AI has been used in financial services for a number of years now. And people are using it, robo-advisors, chatbots, and a lot of behind the scenes also helping make things more efficient. Operations. We don't all want to read tons of financial documents, so a lot of these documents are being tagged using AI to figure out, "Oh, this is what it's talking about.", so that I could only look for the documents that I want to read or the sections within a document that I want to read. If you're looking for companies to invest in that fit a certain theme, that's another good place for AI.
Alex Lieberman:
Love it. And so just to make sure I understand, it sounds like AI, as much as it is very much in the zeitgeist right now, probably in a lot of ways as a function of what ChatGPT and GPT-3 did for making it accessible for everyone to interact with large language models and with AI. It sounds like from your vantage point within financial services, AI has been a part of leveraging these tools for a long time. And you even referred to robo-advisors. And when I think of that, I think of any of these tools that are investing your money for you based on your goals and your risk tolerance. Those are all leveraging AI in different ways.

Sarah Hoffman:
So, all of those tools are leveraging AI. The difference here is I guess twofold. The main difference is we've democratized AI. You used to need to have really data scientists with a really, really strong AI background who are creating all of this. And to some degree, you definitely still need them. But now, any of us, even without any AI or technology background, could go and actually create something that uses AI. So that's I guess, the primary difference. The other thing I would highlight also is the natural language abilities. You can talk in your own way and it will talk back to you in the way that you ask it. And that also just didn't exist well before.

Alex Lieberman:
Meaning before you had to speak in code, so you had to have technical knowledge to be able to interface with AI?

Sarah Hoffman:
Yes. And even if there was a front end available to you, you couldn't say, "Okay, but now explain that to me as though I'm a fourth grader." You'd have to use very specific language for it to even answer you in its very specific language.

Alex Lieberman:
Interesting. So, let's talk a little bit more about generative AI, 'cause you were saying how this is something that you're really excited about. And I'm excited about it also. I have spent more hours than I care to admit on a tool like Midjourney, thinking that I'm the world's greatest artist from creating art based on prompts given to a generative AI tool. But let's talk about it in the context of financial services and specifically financial advisors. How do you see generative AI aiding or improving the work that financial advisors are doing for their clients?

Sarah Hoffman:
So the way I see it, you have the financial advisor side and the client side. Financial advisors can definitely benefit from a good generative AI tool because there's just so much information. If they can have a tool that could give them that insight that they need right then and make it easier to find what they're looking for, I mean, that just makes, we talked about efficiency, that makes them a lot more efficient. And they can help their clients even better.

And then from the client side, also, if we talked about education, having a tool that could really explain to you more so that when you're going to meet with your advisor, you have much more knowledge, you can have a much better conversation. And I'll give an example with-
Alex Lieberman:
Yeah, that'd be awesome.

Sarah Hoffman:
... the healthcare space. So my mother had an MRI recently, and instead of going to Google and trying to Google each word, I just went to ChatGPT, asked her to explain everything. I could follow up, "Is this common for someone in this age range? Someone with this health situation?" And then when I met with the doctor, I didn't have a perfect understanding of everything, but I was able to have a much more intelligent conversation.

Alex Lieberman:
Totally. And yeah, I think going back to the example of financial advisors, I think from a client's perspective, I think about my FAs, I trust them and I love the work they do, but it can be overwhelming. There's so much information that we cover in a given call when we meet for a quarter. And to have something that can either help them or help me distill this information in a way where I don't feel like at the end of the call, I have enough questions that I could just have another call of equal length asking those questions, I think that would be incredibly valuable.

Let's look further into the future. From an investor's perspective, what can investors hope to achieve with the help of AI-based tools? And paint a picture of what that future state looks like.

Sarah Hoffman:
Sure. So the way I see it, I mean, we're going to all be used to seeking information using these types of tools. And so the investors, the advisors, everybody is going to be using these types of tools. And definitely one thing I should add that's very unique about this type of technology, is that it's not reliable. If you ask the same question twice, you get two different answers. That's something very, very new. And figuring out how to work in that type of environment where things aren't the same all the time, it could be good if you're brainstorming and trying to get some novel thoughts and ideas. But it could also be challenging.

And so being able to work within that future is going to be important for the advisors to explain to their clients on how best to do that. One of the advantages I also see, if we look forward to this future, is for the advisor to be able to see the types of generative AI queries the clients have been using. And then they can just proactively figure out how best to help that customer because they have access to all of this. How often are they asking questions? What kinds of questions are they asking?

Alex Lieberman:
Yeah, it's almost like a personal search engine that they're on the other side of to better inform the topics that they're covering with a client, based on what clients are most frequently looking for.

Sarah Hoffman:
Exactly.

Alex Lieberman:
Super interesting.
Sarah Hoffman:
And even how they asked. If they're like, "Oh, can you explain this to me simply?, or they don't need that simple explanation that can tell you going in, how much are you going to need to explain?

Alex Lieberman:
Totally. That's super interesting. I want to talk about ethics for a second, because I feel like anytime there's a tidal wave type technology like AI, ethics is obviously a huge necessary conversation that is brought up. And there's so many questions around ethics and AI from, how should we think about the ethics of people now being able to use generative AI? Like Alex Lieberman, who's most definitely not an artist creating art that looks as high quality as a truly talented artist. Or biases that exist in these large language models that we're training. What are your thoughts on AI ethics? And for listeners, how should they be thinking about it?

Sarah Hoffman:
Sure. There's definitely so many open questions around this topic. Anytime you use any kind of AI, generally you have the issue of bias because of the data that it's using behind the scenes. And then there's also the fact that generative AI is, you have this challenge where not only could the results be biased, they could also be, calling it hallucinate. They totally could make up facts that just don't even exist. And so, this makes it even more challenging.

And so for today, I think the challenge is figuring out how best to you put the human in the loop. Where do you need the human? Some cases you don't. If it's a brainstorming tool, maybe it's sometimes the unreliability. I always say it's not a bug, it's a feature. If you're brainstorming and somebody throws out an idea that's kind of wacky, that could help you think about an actual better idea. But if you're looking for actual financial literacy information or what stock should I invest in, and it makes something up, that's more problematic. And so, really making sure that there is the human in the loop when it's necessary, is I think, the biggest challenge but the biggest way forward in really mitigating some of these issues.

Alex Lieberman:
Yeah, it sounds like basically kind of like there's different levels of risk related to the information that AI is creating. And based on those levels of risk, the ones that are higher risk, you need to be really thoughtful about where a human is involved in the loop of that process. So, you make sure either completely wrong or partially wrong information isn't being put in the hands of someone that leads to a decision that could be a high risk decision within their life.

Sarah Hoffman:
Exactly. I always say, "Imagine if all your recommendations on social media showed up at your door." I know for most of us today, we would not want that-

Alex Lieberman:
A hundred percent.

Sarah Hoffman:
... because AI makes mistakes and it's not perfect. But if it's just there on a screen and you can choose it or not, that's fine.

Alex Lieberman:
Right. Super interesting. Now, I think any really exciting technology, it is rapidly changing. And so it can almost be discombobulating for people, because just as they're trying to understand what's going on now, the technology or its applications have changed. And then you basically need to relearn what's happening and how this impacts the way that you interact with it. Within the context of investing, how should investors be thinking about the rapid evolution of AI and how their behaviors as investors and the capabilities of the tools that they're using are going to change, such that they don't feel this feeling of whiplash where they're being left behind because the technology is changing so quickly?

Sarah Hoffman:
I think there's just so many ways to think about how to use it in a way that can help you. We talked a lot about brainstorming as a tool. That's just so useful, whether it's financial services or otherwise.

One of the things I'm hoping to see with this technology is a change in our interfaces right now, and not only financial services, but really many websites that you go to or financial services tools that you use, it's so challenging to find the information you want. For websites, we've somehow decided that having lots and lots of tabs is the best interface we could imagine. And I just don't see that.

But one of the things that I like about generative AI is it reminds me of when Google became the popular search engine. And it was one of the primary reasons that I think that people liked it, is because it was so simple. Just going to give you one text box and that's it. And that's what generative AI is doing. It's one text box. And I could see that being the future interface where instead of having to figure out, "Where do I go to see what I'm looking for, how my fund is doing compared to X, Y, Z?", it's just, here's a text box. I'm going to ask what I'm looking for. I don't need to know how to navigate this. I can just get the information I want.

Alex Lieberman:
Totally. Last question for you. I want to talk about investors of different levels of sophistication. So first for new investors who are trying to think about... they're just trying to have a strong foundation for thinking about investing moving forward because they're kind of new to this world. And they're thinking about what AI can do for them, what are questions that they can ask their financial advisors, such that they get answers that are helpful to them in navigating the investing landscape moving forward?

Sarah Hoffman:
So I think for new investors, and I guess the first thing I would say for new investors and experienced investors, I'll just start off with, there are certain limitations to this technology that I think not everyone's aware of. And it's really making sure, and the advisors helping make sure, that people understand the limitations.

I was talking to someone who mentioned that they knew somebody who was using this technology alone to make decisions about what to invest in, not realizing that this technology is not real time. It's very expensive to update a generative AI model, so it might not know anything about the last couple of years. And so obviously, we all know so much has happened in finance in the last couple of years. It doesn't actually make sense to make a decision without having that knowledge. But sometimes I think
the investors just don't know how this technology works, and that it doesn't have that information. So firstly for all types of investors, it's making sure, advisors should make sure that they understand the limitations. Not only could it make something up, it doesn't actually have real time information.

Alex Lieberman:
It could be stale. Yeah.

Sarah Hoffman:
Yeah. That aside, I would say for new investors, really one of the nice use cases to think about for this technology is how to expand your understanding of financial services. It's really, really a good education tool, before you meet with that advisor and even after, just to really make sure you have a good understanding going in.

Alex Lieberman:
Totally. Yeah. I mean, like I was telling you before the podcast, I used to spend all of my time when I was trying to research something, I had two options. It was Googling something or it was asking a friend who I consider to be an expert in the space, which I think is always a good option. But a lot of the research I do now is just interfacing with GPT-4 and continuing to ask questions. And like you said, you can just keep asking questions until you understand it at the most granular level, and not feel embarrassed about how many times you've asked the question.

Sarah Hoffman:
Yeah, and what I love about this is, we've talked about personalization in using AI for so many years. But this really takes personalization to that individual level, because we all have our own different knowledge going into something. We all have our different ways of learning that work best for us. And now, we can actually use this technology in our own individual way.

Alex Lieberman:
Totally. And for more advanced investors who are trying to think about how AI can innovate on or support the strategies that they have in place related to how they put their money to work within their portfolio, what would you say to them?

Sarah Hoffman:
Sure. So we mentioned the limitations already, which I always like to start with. But knowing those limitations, I think it could be a really, really beneficial brainstorming tool. If you do have your strategies, ask it. Is there something I'm missing? Is there something else I should consider? You don't necessarily have to take its advice, but getting just another partner to discuss things with. And maybe there's something you didn't think of that you should incorporate to some degree. So really using it as a brainstorming tool to think about other types of strategies, ways to enhance your strategy, is I think, a very beneficial use case for this.

Alex Lieberman:
Amazing. Well, Sarah, thank you so much for joining the podcast. And appreciate all of your thoughts and wisdom around the impact that AI is going to have on investing over many years to come.
Sarah Hoffman:
Thank you so much for having me here.

Alex Lieberman:
This was great.
Thank you for tuning into Fresh Invest today. I hope you feel like you've gained a stronger understanding of the rising dynamic of AI and investing, the specific tools investors can tap into, and evolve capabilities that can be in your grasp. AI is a topic that a lot of people feel unsure about and that's understandable. But the knowledge that we gain today can help us as investors, feel more confident about AI's potential within investing.

Make sure to join us again next week for our Penn Ultimate episode, Life Stages of Investing, where we'll touch on significant stages of life, including post-grad, blending finances with a partner, and preparing for retirement, and how each stage can correlate to its own unique investing style. This episode's got something for everyone, so don't miss out. And I'll see you there.

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