

# 163 Lee Wetherington

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**Theresa Witham 00:03**

You're listening to the CUES Podcast, episode 163. Welcome to the CUES podcast, where leaders and experts discuss the top topics in credit unions today. I'm Theresa with them vice president of publications and publisher at CUES. In this episode, I'm talking about artificial intelligence with our guests Lee Wetherington. Lee is the Senior Director of Corporate Strategy at CUES supplier member Jack Henry. He directs the development of actionable insights, forecasts and strategy for Jack Henry and the financial services industry at large. To this end, He guides a team of analysts who track the trends and implications of the emerging technologies disrupting and transforming the banking industry. You may have seen Lee at a conference as he delivers keynotes nationwide, focusing on opportunities and challenges in FinTech payments and digital banking. We had a fascinating conversation about AI and how it is poised to revolutionize the credit union industry. So let's get started. Thank you so much for joining me today. To help our listeners get to know you a little better. Do you have a leadership quote or mantra that you live by?

**Lee Wetherington 01:23**

So I'm not the kind of guy that keeps a leadership quote, or a mantra in his back pocket to pull out when questions like that come. But I do have a take that is both professional and personal in its application, and that talking about my own philosophy of technology, but it's that technology, when done right is supposed to minimize the mundane to maximize the meaningful. And I think it's a pretty practical advice, not just professionally, but also personally. And then once you think you've got to beat on that the real challenge is to realize that there's meaning in the mundane. But that's a different podcast entirely, Theresa, so I won't I won't take us down that path.

**Theresa Witham 02:00**

Thank you. I love that that it sounds like it would be an interesting podcast. But maybe we can do that. That is really great. And I think that it segues really nicely into our topic of artificial intelligence today. So AI is poised to revolutionize credit union operations. What would you say are the top maybe three to five use cases for AI right now?

**Lee Wetherington 02:27**

Yeah, that's actually a very straightforward question to answer right now. And we know that from a lot of different, not just survey research, but even tracking sort of where venture capital is going in the AI FinTech space. The top two use cases are member service, specifically, in the short to mid term, generative AI assist technologies to real people in the credit union who are fielding members moments of need in real time through digital channels through the mobile app at cetera. The number two use case and this has actually been around for a while, but is the application of machine learning to fraud

detection, fraud prevention, fraud mitigation, using new generative AI pattern detection technologies is being brought to bear and that space in more new and powerful ways. We are still in the middle of the fraud epidemic every running 12 months, there is more broad that we've all experienced than at any point in history, and that continues to renew. So the fact that AI is being used by bad players, by fraudsters by hackers means that even if you were somewhat ambivalent about the application of AI, you can't be that anymore. You can't fight AI augmented fraud without AI tooling on your side, as well. So those are the top two use cases. That's where most of the action where most of the tech spend is happening right now, in AI. The other is sort of rounding out would be credit underwriting, specifically financial analysis so that if a member is applying for a loan, having an AI look at a bunch of documentation submitted as a part of an application process, summarizing that and an accurate and meaningful way to expedite underwriting and ultimately loan decisions is a big use case, sales and marketing automating hyper personalized product, service recommendations for the member. And then finally, and this doesn't get as much attention but this is also there's a lot of time and energy and funding being poured into this right now, but is using AI to completely reimagine and re engineer the user interface to everything. So in terms of credit unions, if you think about what we loosely refer to as the back office, back office as a singular noun is a misnomer. What the back office actually is, in most credit unions is a patchwork of sometimes 1520 plus backends disparate back ends or administrative consoles, to all of the different systems, partners, third parties embedded fintechs, your core, etc. Probably the thing that I'm most excited about, even though it might be the least sexy of the use cases at the moment, is what generative AI from a UX standpoint might mean for unifying, that otherwise hopelessly fragmented patchwork of a thing we call the back office right now, that's where I think the lowest hanging fruit are for gaining new orders of magnitude of efficiency for the credit union lies and not just unifying that back office. But making navigating a unified back office easy, as easy as a natural language prompt to a chat GPT. In other words, you can just ask a question and natural language of all the systems that you use to run the credit union and therefore also to solve any given members moment of need without having to log in to these, you know, disparate back end systems. So those are the top use cases at the moment.

**Theresa Witham** 06:06

How much time would that save employees? It's Can you

**Lee Wetherington** 06:10

imagine, I mean, this is why I think it's the one of the more compelling and exciting things to think about I've seen, this is one of the things that that we're working on. And I've seen the these things in action, it is jaw dropping, to think about what this next era of data driven Financial Services is going to mean, not just for the way money moves, but specifically the credit union movement. And the idea of people helping people, I mean, just imagine how much better faster and with higher quality, you can serve a member, if you're not navigating, not just through the menu interfaces that we're all familiar with, but not having you no longer having to navigate multiple of those disparate numbers of those across all of these different systems that you amalgamate together just to operate the credit union and serve your members. sounds

**Theresa Witham** 06:59

super exciting. However, credit union wants to dip its toes into AI, what would you recommend, where and how they should start?

**Lee Wetherington** 07:08

That's a really good question. I get asked that all the time. I would say if you personally, professionally, if you don't really have an intuition yet about what AI is. And by the way, that question betrays a certain lack of understanding AI, as is many refers to many different things. And there are many different types and species of AI. But if you want to develop an actual useful intuition about how this stuff works, and therefore what it's good for, and what it's not good for, I think one of the best places to start is Stephen Wolfram is short book called, What is chat GPT doing? And why does it work? It is a very, very short book. It is the one that Sam Altman, the CEO of open AI would recommend to anyone trying to get an initial understanding and orientation in and around different types of AI there is, you know, we talk about generative AI, that's a form of statistical AI. But there's also other forms of AI that have been around for much longer and machine learning techniques, what we would call symbolic AI, that is rules based AI, where even those types of AI have natural language interfaces to them now, so that if you wanted to ask a very high order, say math question, a quantitative problem that you're trying to solve, that humans would find the math difficult to get to an answer to, you can go to a symbolic AI like a Wolfram Alpha, by the way, named after Stephen Wolfram, the author of the book I just recommended, and it would actually take your natural language prompt, reduce it into mathematical language. And you can do hard computations on that to get black and white quantitative answers to mathematical questions. By the way, statistical AI by itself generative AI, it's just a generative AI can't do math on its own. Now, a lot of these distinctions get obscured now, because we have multimodal AI which is to say you can have a generative AI and it is integrated to symbolic AI is to image generating API's to audio generating API's, some of these distinctions are getting lost now that we're coming into these multimodal forms of AI Google was the first to bring a commercial grade multimodal AI to market in the form of Gemini and everybody's trying to catch up with that right now that start out with Steven Wolfram's book. And then the other thing is couple that with just personal use and experimentation at home, develop some proficiency and familiarity with the different popular Gen AI chatbots. Play with them, you know, play with chat GPT play with Gemini, play with these image generators, play with CO pilots, see what they're good at and what they're not good at and just develop some basic intuition about what they're good at doing and what they're not good at doing. And then that'll help you You navigate where and how to apply them? And in what sequence at the credit union over time.

**Theresa Witham** 10:04

It sounds fun. That is fun. By the

**Lee Wetherington** 10:09

way, can we stop on that? This is we are all lucky to be alive at this moment, right? Because you can emotionally respond to what's going to overwhelm of what's happening with AI, its applications and its evolution, you can respond in one of two ways. One is to just fear and uncertainty and doubt, right? It's just panic and overwhelm and paralysis at the end of the day, or you can go, this is magical, that what is this? How is it that we've now created a technology that is unpacking the geometry of the way in which we make meaning with language, there's so many different things here to be truly and authentically fascinated with, and joyful about and to have fun and be playful with. And I think that is the

best way to approach this. And that will also expedite your learning curve, and establishing some competence and some proficiency. So

**Theresa Witham** 11:07

you've talked about some things that AI can do, what are some things AI can't do

**Lee Wetherington** 11:12

get? Yeah, so like I said, there are certain things that no AI can do? Well, if you want to talk about relationship, you know, the credit union movement is people helping people. So one very big delimiter to put around AI is that there are two different camps. Basically, when it comes to AI, and its application in our industry, one camp would be the credit union movement camp, which is that technology should actually expedite and deepen and improve the quality of people helping people. It's not to replace relationship, it's to enhance relationship at scale. That's the better way of understanding what AI can do best, then you have many really large providers. If you think of some of the biggest banks in the country, if you think of big tech companies, etc. Many times their philosophy is different. It's like where can technology replace human beings and therefore, replace relationship. At the end of the day, one thing that will never change is that we are social creatures, human beings are and people helping people is and always will be a foundational cornerstone, whoever can use technology, whether it's AI or any other, to enhance relationship at scale, to personalize things, to deepen connections between real people in moments of need, specifically, and especially, those are the winners in terms of what technically AI can and can't do. That gets down to the more nitty gritty questions of what kind of AI you're talking about. Again, as I just mentioned, statistical AI does not do math. Right. So the way to think about that is, if you were to ask an early generation, chat GPT, a basic elementary school math question, right, a word problem, as we would call it in school, it would not be able to answer that question with any kind of quantitative definition, it would only be able to scout its corpus of language and text that it have been trained on to see whether a word problem like that one with similar values had ever been asked and answered as a part of that text corpus. And then it would only be able to give you a somewhat statistical answer back that, oh, I think the answer to this word problem is x based on why you know, these 123 factors. But often, it was completely wrong. Because it's a statistical AI. It's just predictively trying to put one word after another word or one part of a word after another word. That's what we would call tokens, and do that in a statistically probable way. But it also randomizes the probability of those guesses. And that's where you get this cumulative magic of it suddenly making sense and sounding fairly human to us. But statistical AIs are not good at math. That's why these days in a multimodal context, if a statistical AI gets asked a hard quantitative question, it is going to pull through an API connection and interrogate a symbolic AI like a Wolfram Alpha, that will take that natural language question, turn it into mathematical symbology. Do the computation, get the right mathematical black and white answer, and then bring it back into the original model or the original chatbot where the question was posed in the first place to give that person the answer. So again, a lot of these distinctions are being lost now that we're in this multimodal environment, but that's why I recommend Stephen Wolfram his book is to better understand the different types of AI and what each type or flavor of AI can and can't do, because that will give you an intuition about where the best applications are or are not for the credit union.

**Theresa Witham** 15:11

It almost sounds like my AI assistant has its own AI assistant times. Oh,

**Lee Wetherington** 15:19

you That's exactly right. In fact, that is literally now becoming the case. Because what I didn't want to get technical, but one of the more exciting things that's happening now, on the back ends of these models, right to say chat, GPT 4.0 Chat GPT 4.0 was trained on this amount of data that the human imagination can't really grapple with. The scale points of data at play here are are not easy to comprehend 100 million dollars right worth of time went into training chat GPT 4.0. But then, once that training was complete, if you were to give that initial model of chat GPT 4.0 A prompt, what you would get out of it is complete garbage is completely useless. There is then a layer of what's called Bridge engineering and reinforcement learning and guardrails that have to be done so that you get eventually two outputs from chat GBT 4.0 that are magical and useful and relevant and meaningful to us. Right? A lot of people don't understand that layer. One of the things now, however, is that all of the time that it takes to do that bridge engineering, they're realizing that there could be other models who take the output of the first as its inputs, apply the different types of tasks, that is guardrails, accuracy, data, provenance, validation, you know, all of these kinds of things. And does that first order of filtering, if you will, are shaping up or fine tuning and creates an absolute in real terms, a conversation, a cyclical feedback loop between the first model that has been trained and the second model, that is, in essence tuning the first the outputs of the first model. So when you say it sounds like my generative AI assistant has generative AI assistants, that is technically the case here and the latest iterations of the way these models are being trained and tuned at scale.

**Theresa Witham** 17:15

Wow, that is a lot to think about.

17:20

Yes. Sorry about that. Oh,

**Theresa Witham** 17:23

I love Oh, interesting. So let's think about how AI enhances or can enhance member experience and satisfaction within credit unions. Are there, like a specific case or example that illustrate how AI can do that? Yeah,

**Lee Wetherington** 17:38

so it's, first of all, it's really important to understand that generative AI is one of an entire constellation of emerging technologies that are converging to fundamentally improve, not just the member experience, but the unit economics of running a credit union. Right. And that is to say more practically increasing the quality, the velocity, and the scale of people helping people as we were talking about just a moment ago, when we were talking about use cases. So where members are going to see and feel this first is probably not so much in terms of their relationships with the credit union is not going to be so much a credit union unleashing onto them. A generative AI chat bot, even though that is happening, but that has to have very tight guardrails around it for regulatory reasons, or examination purposes, etc. So it's really going to improve the human responses, both and that a member gets from a credit union when a member is having a moment of need, I beat this drum a lot. But one thing that we always need to

remember is that since 70%, of the American population is not financially healthy. There is no such thing as a small money problem. Right? Right. For an average member, any money problem feels like catastrophe is about to happen. So in those moments of need, all any member wants, is somebody in a position of knowledge and power to tell them that everything's going to be okay. And then to make it okay, right. So this is where generative AI assistance on the credit union side really is going to materially change the quality of what that member experience is interacting with the people at the credit union, because those people, those full time employees, the service staff, members of the credit union, now have this AI degenerative AI assistance tooling. So let me let me step you through what that means. Let's say that a member opens up the credit unions mobile app, and they have in their mind, okay, my balance should roughly be x, and they look and their balance is nowhere near x. It is much less. So now. It's like oh my gosh, and so now they're looking Through transaction detail what happened here, what cleared what came in that I didn't really anticipate. And they see two transactions that they don't recognize, right? They're having a mini panic attack. So the way all this should be working now is the members should be able to tap in a single place in that mobile app immediately begin an authenticated, secured and augmented by the way chat conversation with a real live human being the right human being right off the bat, because of the way keywords and the initial reach out are triaged. They're talking immediately to some real life person at the credit union. And instead of having to describe, they don't have to authenticate themselves, because they're inside the context of the app, they don't have to describe the transactions in question will remember the account number you'd like if they ever have to do that over a phone, they can simply tap the to questionable transactions. It's attached to this authenticated augmented chat thread. And on the credit union side, a generative AI assistant is looking at that incoming inquiry, or reach out or panic attack, if you will, from the member. And then immediately milliseconds, it says, here's the best answer based on all questions like this from similar members about similar issue. This is the best answer immediately to their question. The person at the credit union then looks at that and can say, yeah, that looks perfect. Or they can say they can literally tap, you know, right click on that generative AI suggested response. And they can cure or curate that response. In other words, they can say, You know what, this is the right answer. But man, this sounds really formal, right click, make that more friendly, or Right Click Make it more formal, maybe it's too casual. Or it might be that oh, you know what this is Teresa. This is one of my best friends. And I know that Teresa loves hip hop. And I love Snoop Dogg and Teresa love Snoop Dogg. So this is going to be hilarious. Right click, put this in the voice of Snoop Dogg, right. And it will do that. And you can send Theresa the answer to her moment of need, but she's gonna know it's from you, her friend. And it's in the voice of Snoop Dogg. And so think about that just for a minute, not only is the moment of need resolved more quickly and more accurately than has ever been possible in the past. But now you have an opportunity for creativity. And for fun, that in the back office of credit unions where you would think there is no fun in the back office of the credit union, right? Typically, you would think that way, right? You're just pushing buttons and doing processes and et cetera, et cetera. But now you have some artistic latitude, some personal latitude in the responses back. Here's another thing, what if Theresa is actually a native Spanish speaker, I, let's say Teresa is a native Spanish speaker and I am on the credit union side, fielding her moment of need, the system already knows that she's a native Spanish speaker, she can be sending in her query to you in Spanish and your say I as the person on the credit union, I will see it in English. And whatever responses that I create, or I approved from the generative AI assistant will automatically be translated back into Spanish. So on both sides of that back and forth, from now and forever, whenever Theresa comes in, can you imagine just the power of that

alone is incredible to think about. So that's where I think member experience and member satisfaction, you know, at the hands of generative AI assistance is really going to make the first and biggest impact and impression on what members get from their credit union. Well,

**Theresa Witham 23:34**

I look forward to the day when my credit union talks to me in the voice of Snoop Dogg.

**Lee Wetherington 23:40**

Right? Isn't that a joyful thing to think about? Like, oh, by the way, all of the HR people and credit unions are now panicking because they're like, I don't think we want our you know, to give our staff members that kind of latitude, what if they make a wrong choice and, and offend somebody in some way or whatever. So I mean, there are there are certainly those issues to think about. But no matter what you're introducing now, through the cumin curation of the generative AI assistants, you're introducing a new layer of choice of agency of creativity, of judgment of discretion, as well in the backroom of the credit union. And I think that means that those jobs and doing those jobs will be more meaningful and purpose driven than they've ever been in the past when it was just push this button, do this process, you know, try to find out this answer logging into the disparate back ends of you know, 1520 different systems. It's just going to be a new day, and it's a better day. Again, I feel lucky that I'm gonna you know, going to be around hopefully, to see how this all plays out.

**Theresa Witham 24:45**

It's a better day for sure. Can we talk a little bit about the potential cost savings or revenue generating opportunities for credit unions through AI adoption? Yeah,

**Lee Wetherington 24:58**

for sure. So if you think back To the use cases you asked me about initially, let's take fraud first, right? The ability to identify fraud patterns in milliseconds and arrest transactions before they ever processed before they ever clear or settle to the core. That's immediate cost savings, right? So if you can materially decrease the instances of fraud and the resulting fraud losses and liability, you're immediately saving, you know, material amounts of money for the credit union. I don't think I need to belabor that point. The fact that the generative AI assist technology that I just described, it means that you can operate the credit union at higher quality with the same set of full time employees without necessarily having to hire as often or as frequently as the scale of the credit union grows. That is a very, very big efficiency gain for the credit union. If you think about what happened in 2023, we had the skyrocketing expenses, not just on interest expense, right, and the cost of funds with deposits. But on the non interest expense side, it was having to you know what you're paying for your people. Also, wages have continued to go up. So that was the biggest driver of what went up in terms of its terms of non interest expense. So when you think about now going forward, wait a minute, if we're equipping our full time employees at the credit union, to be able to field and resolve moments of need, with higher quality, more creativity, these ways that deepened relationship without having to hire as many new people to scale up with every X amount of millions and assets or X amount of 1000s of new members that we put on that alone is also a big cost savings for the credit union. The other thing and this is gets to revenue is if you have these generative AI eyes, doing financial analysis and on underwriting for the loans that you're extending to members. And through that analysis, they're able to take in more external

data to inform underwriting for those loans. And to do it at a quicker pace. The bottom line there is your ability to say yes, to more loan applications based on better and more accurate analysis of those broader sets of data. And record times means that you're going to increase your loan book, you're going to increase the revenue that you generate off of the loans that you extend to your members. And then probably even more powerfully, you're going to get a higher uptake rate on the products and services that you recommend. Because with generative AI those product and service recommendations will be more accurate, they will be more relevant, they will be hyper personalized, they will take in more information. There's a lot of chatter about open banking this year, because the CFPB rule on financial data privacy and the exchange of financial data, how that should happen, how it can happen in a safe way for everybody, what open banking is doing and those rules that standardize access and exchange of financial data over the platforms that do that, you know, where the Felicity and plaid, et cetera, et cetera, et cetera, all of that means is that the credit union is going to be bringing home to its members, all of their data from the disparate financial service providers and financial apps that they're using today. And you're going to be able to use that broader set of financial data on your own members to train these generative AI models to make better next best product and service recommendations. In fact, we should stop on this point, Teresa, because this is a big blind spot for most credit unions. If you're looking forward into this next era of data driven financial services, the number one question that most credit unions are not yet really squaring with is how much of your own members financial data do you have at the credit union. And that stumps a lot of credit unions, by the way, but because of financial fragmentation, because the average member has relationships with between 15 and 20 different financial service providers, because they have on average 14 financial apps on their phones, their financial data is scattered hither and yon. And the average credit union these days would be doing really well to have maybe 25 to 30% of their own members financial data. So if you're doing product and service recommendations for your members, based on only knowing one quarter of their money life, how much do you expect your members to take you up on your recommendations based on that nowhere near full picture of what they're doing with their money and how they're what they have and where they're conducting financial transactions, etc. That's why open banking is so critical to this next era of generative AI because it is the source of that sometimes 75% of financial data that don't have on your members open banking is the way to plug financial data deficits on your own members so that you've got adequate data to train these models to make these more specific and relevant recommendations that yield. And we know this because we've seen the research that yield members two to three times more likely to take you off or to act on that next best product or service recommendation, because they know that you've brought their entire financial picture to bear bringing it all home to the credit union.

**Theresa Witham 30:31**

And that sounds like a great service for the member to to be better understood, ultimately seems like it well. Yeah, it's

**Lee Wetherington 30:39**

this is a this is you're absolutely right. It's not about just better understanding them, it's helping them better understand where they are with their own money. This is what a lot of us don't really fully appreciate. The way we got to 14 financial apps on our phones, is because over a long period of time, we each had certain moments of need, that were best solved. That single moment was best solved by

an app, right? So Teresa, hey, I owe you money. Do you have Venmo? And you say, Lee, I don't have Venmo. I have cash out? And I'm like, dang it, Teresa. And then I download Cash App, right? And I send you the money and then later on it somebody else. They say, Hey, I owe you money or you owe me money? How can I send that to you? I was like, Well, I have cash app and Venmo. They're like, Well, all I have is Zell, I'm like dang it. And I didn't you know, I set up Zell, am I and this is what I call the aggregate of spot conveniences cumulatively over time lead to this nightmare of fragmentation, where people don't know where they stand with their money, because it's scattered over all these different apps and financial service providers. So if the credit union can plumb into open banking rails, bring that data, at least from all those different providers and apps home into a singular picture. Now you've got definitive competitive intelligence, on what financial products and services they're using and consuming from whom, how often and for how much, right, that informs your what the credit union needs to bring online in terms of a next feature or product or service. And plus, you've now solved the fragmentation that is tearing at financial health for all consumers. If you don't know where you are with your entire money picture. How can you really rationally know what to do next? Or how to do better? And unless the credit union brings that data together? You know, all of which to make those recommendations? How can it in good faith be making recommendations that are actually the next best thing any given member should be doing?

**Theresa Witham** 32:35

It's so exciting. So I'm going to shift a little bit here, we've talked about a lot of exciting use cases, opportunities. When people talk about AI often that the sort of ethical concerns surrounding AI come up, including that it's going to displace workers that it can reveal biases. How can credit unions ensure ethical and responsible use of AI technologies in their operations, and our credit union employees going to lose their jobs to AI?

**Lee Wetherington** 33:07

Okay, so let me take the last question first, or probably the best historical parallel to refresh on in this question about, is AI going to move my cheese? Or is it going to take my cheese away? Right, altogether, is to think back to the late 1960s. Where you have the advent of ATMs, right? And what a lot of people who may not even have been around at that point there's a lot of young people around now may not realize is when ATMs first came out. The headline from analysts was Well, that's it. We don't need tellers anymore. So tellers are going to go away. But if you look at what happens to the number of tellers in the United States after ATMs come on the scene in the late 60s and early 70s. What happened is the number of tellers in absolute terms went up. And it went up consistently every year until 2010, by the way, and so why was that? Well, how is it that you have an automated teller machine? That quote unquote, replaces the teller right? You put them on the outside of the credit union, you don't need to come in anymore? Why are there still tellers? Well, it's because that the self service enabled by ATMs so dramatically improved the unit economics of that particular credit union and all credit unions, by the way, that it enabled those credit unions to be able to afford to build more branches and more areas, and what do you need inside of those new branches? More tellers. So you have to understand the relationship when you have a technology is fundamental. Now ATM saying that was you know, radically transformative for the time. And now we're in we're talking about AI and all of its different applications and use cases, we're talking about something that is even more impactful and is going to even more dramatically improve the unit economics of running the credit union. So my take on

that parallel is that you're not going to see AI your jobs or people who work at credit unions having their jobs taken away by AI, your jobs, if anybody's going to take your job, it's going to be another human being, who is better at using AI tools. Right. So your job is not being stolen by AI. It's being stolen by people who have kept current on how to use AI tools to do their jobs better and more efficiently than ever possible before. But I think in practical terms, what it means to Risa is that the people who work at the credit union today are going to be able to be so much more efficient and better and creative, by the way, with what their productivity and their outputs are, that you won't need to hire as many new people as the credit union grows and scale. Okay, so it's not about you know, knock, knock, knock, here's the AI, everybody get out of the back room, we don't need you anymore. That goes that is completely antithetical by the way to people helping people, right? Who's going to be able to best use and lever these AI tools to do people helping people better than it's ever been done before and at scale points never before possible. So that I think is the better way to answer that question. Now, let me answer the first question about ethics. There is a lot to be concerned with here about not just ethics, but just basic privacy, right? So there's all kinds of issues around how do we make sure that our members personally identifiable data, their PCI card data, maybe intellectual property of the credit union code that the credit union has written, doesn't get digested into models that the credit union doesn't own or control, and get burped out later, when some 13 year old comes up with this weird prompt for a large language model that makes it burp up and regurgitate members private data, for instance? Right. So that's one concern, I think that's a blocking and tackling type of concern. And there are already answers to that, by the way, Google, for instance, who has been doing not Are they just sort of they acquired deep mine. That's why they're forefront. Now in terms of AI, they've been applying AI and applying the AI tooling that they've built, including new ways of developing software around language models, it's called Software 2.0, around neural networks, they've been applying this to their product sets for six, seven more years. And by the way, Google has 10 products that have 1 billion or more users each. Think about that for a second. So Google has 10 products with 1 billion plus users each and they've been flying and testing and hardening these AI tools against those populations of users for all of these years, when you compare them to, for instance, a Microsoft who does not have a single, no single product that Microsoft has in the market has 1 billion users on it, Amazon AWS, they have one it's called Amazon. So when you start thinking about who has the data, and who's been doing this longer, and who has been hardened, you know, Google comes up at the top of those lists. One of the things that Google has perfected is being able to take, they've got a tool that can you can aim at any dataset, and it will completely remove all ppi, PCI, IP and other types of proprietary data from that data set definitively. And they'll even legally indemnify you or the credit union, that that is the case before a set of data that you want to train or tune a model of theirs with is brought to bear. There's also the sophistication of performance of small language models. These are models that are 100 times smaller than, say, a chat GPT 3.5. Their performance is now beginning to be on par with large language models. This is something that we didn't expect to happen. And it's something that we've only seen sort of play out in the last 18 months. That's good news for credit unions, because small language models can run on device, the credit union can control them and their own exclusive cloud instance that only the credit union has control of what goes in and what comes out. Right. So regulators are going to like that examiners are going to like that. But this gets back to the ethical question is first of all, protecting data. And then second, the outputs How do you protect against bias? How do you protect against inaccuracy? Right? Just wrong, factually wrong information. How do you protect against bad math? Right? If you're relying on a generative AI to do math, you don't understand they can't do math and you

need to be interrogating a symbolic AI model. All of these are problems that are being solved by the application of technology and bridge engineering. And in some cases now models of Adding feedback loops to other models to perfect and straighten and clean and narrow and put outputs within guardrails. All of this is evolving so quickly. But the bottom line, if you read the tea leaves on all of it is good news for credit unions, I see generative AI, ultimately now, because of some of the things I've just described as more of a leveler of the playing field, between credit unions and the biggest banks in the country, big tax even themselves, et cetera, and others, direct to consumer neobanks, etc, that are competing with and against credit unions, this is going to be a leveler, not an exacerbate, or have large, what's called large mover advantage by mega banks that you would on the face of it say, well, mega banks have more data, they have more budget for compute, right processing power to pour through models to find more patterns, to do more, you know, magical and meaningful things. But the way these technologies, the AI technologies and AI development tools are evolving, I see it being just the opposite. It's going to be more of a leveler, we're seeing the barriers to access to AI as a service, and all these different models coming down. And the reason that's happening is because Google is fighting with Microsoft is fighting with Amazon, they're all fighting each other. And what they're fighting with is who can come up with the best models that perform the best and a variety of use cases, industries and verticals, and how can we give that away to get these different industries to use our cloud services? And all of that means that this is becoming more accessible for the average credit union? Well,

**Theresa Witham 41:37**

as you said, is a really exciting time. And so you are the Senior Director of Corporate Strategy at Jack Henry have your title, correct? Yes. Yes. So it's a lot, right. This is a lot for credit unions. How was Jack Henry helping credit unions understand? So?

**Lee Wetherington 41:53**

Yeah, I can answer that? Well, first, probably most practically, is we, you know, struck several years ago, a partnership with Google to build out what we call a unified platform on modern architecture that is public, cloud based micro service architecture. And we did that because we've added all of the big cloud providers, because we're convinced that Google had the world class platform, data infrastructure, an AI tooling around that, that we wanted to bring and make available to credit unions. So that's, by the way, the that's our big project, we've been talking about our technology strategy, our tech modernization strategy, and that's the project. It's all data driven. This is completely data driven. So we were the, you know, we're the first deployment to all of the major open banking platforms and providers, why to bring back data to bear for credit unions and other community financial institutions, they would need for this next era of financial services. So that's one of the biggest things, but we're also doing other more practical things right. Outside of just we provide training and webinars. And you know, I'm on the road, others of us at Jack Henry on the road doing keynotes and articles, and even primary research that we do with credit union CEOs on what their AI plans are going to be. But we're also making what we're learning as we go available to credit unions. So my colleague, Charlie Wright, who's our chief risk officer, actually recently made available a summary document of what he calls the 10 steps to making AI work for the credit union. In other words, what's the organizational approach, right? You got to set strategy objectives, you got to document the ideals and the standards by which you are going to that any AI based solution that you bring into the credit union, you got to formalize and document acceptable use standards for staff, right, you've got to inventory your current use cases in

the credit union and processes for approvals of bringing AI in application to those use cases, you gotta establish some kind of governance model for compliance, you got to think about all of the AI risk mitigation around the use of AI tools and functions and the data involved and red flags, right? How are you going to invest in data and AI infrastructure to support the AI initiatives that get you to your strategic goals? And then how are you evaluating all of the data underneath it? Right? Is it clean? Is it accurate? Is it validated? Is it accessible? Is it structured or unstructured? What do you have to have to do anything meaningful across these use cases? Who are the third parties that are going to help you get there? And you know, what are you going to do about the talent question that you mentioned earlier? Are you going to acquire new talent that does have proficiency in these AI type technology? So those are we're trying to share what we learn through events, training, webinars, podcasts like this, for instance, but also more materially, we're building out We're rebuilding the entire tech stack underneath financial services generally in credit unions specifically, so that credit unions can easily take advantage of these new, more powerful data driven tools with which they can improve the people helping people movement.

**Theresa Witham 45:16**

Well, that's great. We'll include in the show notes, links to some of these resources. And as we come to the close of our interview, I would ask you, Lee, is there anything that I didn't ask that I should have? Or is there anything else you want to say about AI?

**Lee Wetherington 45:31**

I think you asked just the right questions. I would say this, just to summarize, though, where I think the biggest takeaway, and the biggest blind spot for a lot of us is, is that the advent of generative AI, along with what we now know, is a top three strategic priority for credit unions, based on our own primary research earlier this year, is to increase efficiency. Those two things together, have backed credit unions into having to get serious and sober and smart about data strategy, you need to ask yourself the following question really soberly, and maybe even try to get a quantifiable answer to it, which is, how much of your members financial data do you actually have? Start with that question? And then once you realize how much you don't have and where it's sitting, how do you get that data? How do you bring that data? Obviously, with the members permission? How do you bring that data back to the credit union, so that you can do more meaningful things for your members over time, not as a replacement for relationship, but as an enhancement to real people? helping real people in money moments of need?

**Theresa Witham 46:47**

Well, you've heard it listeners, you know what to do now. Oh, thank you, Lee. This has been really wonderful. It's been a joy chatting. And, again, thanks so much for joining me.

**Lee Wetherington 46:58**

Thank you, Teresa. Thanks, everyone, for listening.

**Theresa Witham 47:01**

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