

PODCAST TRANSCRIPTION SESSION NO. 262-JACK ALTON

Welcome to the Lend Academy Podcast, Episode No. 262. This is your host, Peter Renton, Founder of Lend Academy and Co-Founder of LendIt Fintech.

(music)

Today's episode is sponsored by Lendit Fintech USA, the world's largest fintech event dedicated to lending and digital banking is going virtual. It's happening online September 29th through October 1st. This year, with everything that's been going on, there'll be so much to talk about. It will likely be our most important show ever. So, join the fintech community online this year where you will meet the people who matter, learn from the experts and get business done. LendIt Fintech, lending and banking connected. Sign up today at lendit.com/usa

Peter Renton: Today on the show, I am delighted to welcome Jack Alton, he is the CEO of Neuro-ID. Now, Neuro-ID is one of the most fascinating companies in fintech right now, in my opinion. They have a very unique product, they call themselves Human Analytics for the Digital World and we get into exactly what that means, but, basically, they're able to detect real-time fraud and reduce friction really for any company operating online. But, they've really focused on the fintech space, particularly in the unsecured consumer lending space, and Jack will describe the company and describe the offering in some detail.

We get into all kinds of different examples, but I think what they've been able to do, and they've got lots of patents on this, is provide insight where there was limited insight and this is something that chief risk officers/chief marketing officers are crying out for even today with the reduced originations. Everyone wants zero fraud and a perfect kind of customer journey, but that's really what Neuro-ID is all about and we get into this in some detail. It was a fascinating interview. I hope you enjoy the show.

Welcome to the podcast, Jack!

Jack Alton: Thank you, Peter. Greetings from big sky country up here in Montana.

Peter: So, I've got to ask you....I know this is a podcast, maybe this will entice them to go to YouTube and you've got a great background, a great Zoom background that is pretty spectacular. So, tell us a little bit about that.

Jack: Yeah. That's actually our family farm, the big reason we moved back to Montana, to raise our kids here and try to keep doing technology things where we wanted to live and that picture is actually this morning. I was on a walk and the sunrise was so amazing that I stopped and took a couple of pictures and I thought this would be a great way to share it with everybody else. Even after growing up here and being five generations from Montana, when you wake up to a sight like that, it's hard not to stop and take a picture.



Peter: That is spectacular, spectacular indeed. So, go to YouTube, you'll be able to see it there, everybody. Okay so, let's get started by basically giving the listeners a little bit of background, tell us what you did before Neuro-ID.

Jack: Sure, yeah. So, I grew up in Montana, my wife and I both went to college here and then we moved down to Austin, Texas and I got involved in several VC-backed companies. I was involved with a company that invented WiFi which was later on sold to AT&T so that was super exciting and then moved back, wanted to take all that experience I had in Texas and apply it here in Montana. So, Neuro-ID is the third company that I've done since I returned home here about 12 years ago and it's been super cool to be able to demonstrate that you can live, kind of work and play where you want and COVID has really punched that out more than ever. I think our population here in Montana has probably tripled in the last five months.

Peter: Wow! That's funny because you can live anywhere you want these days if you're just doing Zoom calls. So, yeah, maybe let's just talk about Neuro-ID and what you guys do. I know you've got this tagline on your website, Human Analytics for the Digital World, so let's just dig into that and tell us what you guys do.

Jack: Yeah. It's been super fun, it's a cool story of kind of research and scientific discovery and patented technology all coming together to solve a really big need we have right now. You know, lots of scientific research shows that a foreign person, our own AI that we have in our head and in our eyes and in our ears, allows us to make really accurate judgments on trustworthiness and competence and frustration. But, when we moved online, all of that was lost so our two founders who have over 30,000 Google scholar citations in the field of human computer interaction, they're literally the leaders in the world, they had this question, they said, what if we could digitally communicate the way we used to when we are in person.

That kicked off a bunch of research across several universities. In 2015, the company was founded and then in 2017, after they had proven that this technology, literally how we tap, type and swipe, could be used to understand your intent, to understand your identity, to really facilitate companies and customers online communicating better, they decided they wanted to take it to market so that's when I came in as the CEO of the company and started forming a team together, raising a couple of rounds of capital.

And now, 60 million customer journeys later, we're quickly being adopted by leading fintechs, insurance companies and merchant inquirers as they realize what's missing is the human analytics, the human exchanges that we have when we are in person are gone when we moved online. So, that's what we're doing, we install our Javascript and literally like a light being turned on, they can, all of a sudden, realize where is the friction in my current process and where is the fraud that I can't see today in historical data.



Peter: So, maybe let's talk about that and talk about the online customer journey that every ecommerce company.....anyone who's doing commerce online and wants to optimize that. So, what are some of the things that you've seen that's bad about customer journeys today?

Jack: Yeah. I think that the thing that was most shocking to usI think if you dig deeper, you talk to the analyst community, you'll see the ugly truth behind our digital transformation, so far, 15 years into that we've stalled out. We've tried to take the friction out of a customer journey, but we get to that same point where we may have made our offer, selection process easy and your purpose of your loan or your credit card, but then we go to the chief risk officer and here she has a really difficult task of determining, of these 100 people that are coming through, who are my 95 customers that have, you know, a legitimate intent, they are who they say they are and their intent is good and then who are the five that are disguised as good customers but really are fraudsters. And, because we haven't had access until now into this in-session behaviors, you know, kind of what's going on as they're filling out or interacting with your brand online, they've been forced to make all those decisions on historical data alone.

So, they're looking at your FICO score, they're looking at your past credit performance, they're looking at all kinds of historical data and they're trying to predict something in the future and the gap that we're filling isthey still use all that historical data, but now, we're giving them a real-time view into how did that customer journey unfold, where are the sticking points and that's really been the big game changer for everybody.

Peter: Right, right. So, I'm curious because what you just said there is applicable to just pretty much any industry that's operating online and I'm curious about why you decided....I mean, you did mention insurance and merchant acquiring, but why focus on online lending as one of sort of the first places to go?

Jack: Yeah, it's a great question. You know, we had patented the technology and validated it in the lab and through research, but we really hadn't commercialized it and used it in the wild. What we found in unsecured consumer lending, specifically, is massive data sets, sophisticated data science teams and teams & organizations that were really trying to figure out how do I improve my customer experience and how do I also detect fraud and they really work hand in hand.

What we found is that if you could see your fraudulent customers better and be more sure about that, you could start to kind of release some of the pressure that you're putting on your best customers so allow them to really start to differentiate and see those good behaviors versus those fraudulent behaviors. Unsecured lending was just a great space for them to share those outcomes for us to train all of our models and then once we're able to train those models to these behaviors, we're able to move it from vertical to vertical after that.

Peter: Right, right, okay. So, I want to sort of get into....I'd love to get a real life example. I mean, you did a session on LendIt Fintech Digital a little while back and did a great kind of visual run through of how this works. So, maybe in the audio kind of environment, maybe you



can show us, demonstrate, as best as you can, a real life example of a customer journey and how it looks after you've implemented Neuro-ID.

Jack: Yeah, yeah, for sure. It's literally....our customers have said things like, it's like you've turned the light on, I can't believe how blind we were before. You know, once someone sees the demonstration of our technology....one of the things we've heard is, you know, I was literally taking just the last answer that the customer input, if we were sitting across a table from one another and I asked you for your social security number and you wrote it down and then you left and you came back and you changed it four or five times, that would make me ask additional questions.

Today, we're blind to that when we're just looking backwards to predict the future. And so, when we talk about the customer journey there's always been big blind spots on key fields that are really important if you're going to be optimizing experience or you're going to be trying to detect fraud. There are really two camps we look at, our third party fraud so identity-based fraud. How familiar is Peter with the information that he's putting in, right? We get very familiar with how we put in our first and last name, our date of birth, our social security; those are things that should come literally to the tips of our fingers, whether we're using a touch or a mobile device. You shouldn't see a lot of manipulation in that, that's something we ask for on a common basis so, our algorithm is looking for anomalous behavior on that perspective.

The other area that we've come into and it's part of our name, you know, if you think of the "ID" portion of our name a lot of people think it's for identification, but really, it's for Intent Detect. The technology can also start digging into difficult forms of fraud like first party fraud where there's an intent to fraud someone. In the past, this has been a really difficult field and it was one of the things that was very encouraging to us when we first took our technology to unsecured consumer lenders. They said, you guys are picking up on family fraud that we've never been able to pick up on. They have the credentials, they may live in the same address, but it is not that person that is trying to get a loan.

So, the two areas that we're really using it to improve the customer journey are two. Answer that first question, is Peter who he says he is, that identification question, the third party fraud question, but also to look atin an environment post-COVID, as an example, if we ask are you currently employed and we have 20% unemployment rates, those are things that really had people pulling back on issuing loans because they just couldn't get comfortable with what the current state was and that's what we're giving visibility into.

Peter: Right, right. Let's just dig into that a little bit because when you did a demo for me months and months ago, I was blown away because you could see in real-time. You also said that you could see when there was an intent to be fraudulent and like you somehow......you have these profiles that a normal person.....obviously, everyone has their own typing style and you really get granular with this, like how someone is typing in a field and you can tell with a lot of accuracy whether this is a human or a bot because bots can try and imitate humans, but you said you can pretty much figure that out so, tell us a little bit about that technology.



Jack: Yeah, yeah, it's a great....the analogy we use is in person we have body language that we're exchanging even if when we're on a Zoom call, but when we move online, you're also portraying or projecting a digital body language as you move through. And if you're moving through an application process or an interaction and you're confident and it is you and you are who you say you are and your intent is good, your digital body language will reflect that.

When we see machine-type behavior or bot behavior, the fact of the matter is it's pretty much impossible, almost impossible to replicate human behavior because we're all different, but what our technology uniquely does is we're able to baseline you against you and then you against the journey that you're on. So, it allows us to be able to really understand that digital body language, what's consistent and what is inconsistent.

Peter: So, when you say you against you, you mean you build a profile...like someone is typing in their first name, is that what you're doing? I mean, what does you against you mean?

Jack: Yeah. From the moment you, as an anonymous customer, we collect no PII. From the moment someone arrives on a mobile or a cursor device, our algorithms starts baselining their movements and looking at how you answer questions and comparing them to how you answer other questions.

So, if you're looking at it through a fraud lens, if you're asked a risk-relevant question like do you foresee a change in your income or your ability to pay back a loan and you first answer no, I don't, and you change it to yes, I do and then you go back to no, I don't because you realize you probably won't get the loan, that's behavior that our customers have no access to today that if we were in person would cause you to probably ask a few more questions.

Peter: Right, right, that makes perfect sense. So, obviously, what people get is the end result which is someone says no and that's all you know and you don't know they go back and forth. I remember one of those things you said there was like...one of the things at the demo like a social security number that was edited like 34 times.

Jack: Yeah. When people see that, that's when the light bulb really goes off and there's both an intuitive use of our technology and then the data science use of our technology. Fraud and risk teams are really good at spotting fraud and risk, they just haven't had visibility that they used to have in person to be able to do that, conversely, marketing and CX teams are really good at seeing their best customers. Again, they've just been operating kind of in a dark vacuum and haven't been able to personalize that experience is all as they're going through the journey.

Peter: Right. So, I can see the application there, but I want to also talk about the friction and the process because, particularly pre-COVID, every online lender wanted to make a frictionless process or as frictionless as possible. Some have now introduced friction as there's volumes are down so far, but regardless. So, let's assume that we're back to a normal state of the economy and people want to maintain frictionless.....one thing that was fascinating that I saw was you can tell not just sort of the page that someone left on, but the actual field so you can say, right, it's



date of birth or it's income, whatever. This is the thing that's saying people get to there and they quit. Tell us about that friction piece.

Jack: Yeah, yeah. The product that we have is called the Friction Index Dashboard and what we realized is that everybody's trying to deliver the best experience possible, but no one's scientifically measured friction, they never quantified it to know where am I starting from and where am I going. It's only been measured really through conversion which doesn't really tell the whole story and, frankly, hasn't been moved upon in the last decade so, the Friction Index Dashboard was really a customer-driven product.

They loved the new scores and attributes we could use to help them build better decision models for fraud, but every time we would give them a glimpse of what their customer behavior was, we noticed that the customer would literally get up out of their chair in a board room and go toward the screen because they have been trying to understand why is it that I'm putting a thousand people to the top of my funnel every day only to have, you know, 10% go through, why are 90% ending up in fraud, frustration or failure. These session level behaviors are helping them see exactly where, not just the page or the event, but actually the session.

Where is the friction happening and then what are the underlying behaviors that are causing it. So, why? When you get down to the level of understanding why something's happening, that gives them all the data they need to make data-driven changes to their form, to their application and then the cool part with our Friction Index is it goes on and it continually monitors that friction across both mobile and cursor devices.

So, CEOs and chief product officers and chief marketing officers don't have to wonder what their customer experience looks like or send a survey out, it literally can log into the Friction Index, can see whether if the consumer friction is going up or down by question, by device type. It's really given them that last leg of visibility that they've needed to kind of get closer to the same person interactions and move away from just digital transactions and start building a real digital relationship with the customer.

Peter: Right, right, that makes sense. So then on that, I'd love to kind of get some sense of, you know, the impact of what you've done. You said a thousand people at the top of the funnel and 10% go through, what have you seen as far as impact on....when someone puts in Neuro-ID, what is the conversion rate, what can it change to?

Jack: Yeah, it's a great question. It's really two things and oftentimes our ROI has a component of increasing your conversion and another one of reducing your fraud. We've seen our technology being implemented at, you know, \$70 Billion fintechs, merchant processor payment facilitator-type companies that have had a decade to build their fraud system. They have ten or more third party fraud vendors included and literally install our technology and see the ability to eliminate 35% additional fraud and the cool part is they do that without impeding their conversion. So, they both had a small bump in conversion and they were able to knock out 35% of their fraud.



If I take it to the lending use case, a lot of times lenders are using things like Plaid or Yodlee where they are asking the customer to log into their bank account. The customer may have worked really well to get the customer to the site, they've selected their loan, they've selected their purpose, they've said yes, I want to do this. Their score card says, you know what, this customer looks good, but I'm going to ask them to log into their bank accounts so that I can see if the income they stated is accurate and if they are who they say they are. While that's a very valuable fraud tool to verify identity and to verify that they have income there, it's not such a good tool from a customer experience standpoint.

In fact, this customer was losing 40 to 50% of their customers every time they would get to that point. So, what we did is gave them a score to say, hey, here are your customers that have exhibited no anomalous behavior, they've interactive with all of their fields as they should have. You have the opportunity to fast track them around that point on verification friction that's causing you to lose 40 to 50% of your customers every day.

From an impact standpoint, what we saw was that they customers that they fast tracked around that bank verification log-in, they were able to double their conversion without increasing bad debt so that drops straight to the bottom line. For them, it created a better experience, it reduced that unnecessary verification friction that they were putting on everybody and focused it on those that maybe were closer to the threshold of their internal score card or exhibited anomalous behavior.

Peter: Right, right, yeah, that's fascinating and I could see how...there are so many applications to that as well. I want to ask this one follow-up on that, but before I go on, you know, you say that...like someone may be very legitimate, but they may not know their income because they just got a pay decrease, for example, so they might have been, you know, three minutes on that field typing in multiple things and that's not forging, that's just someone who just doesn't know. I mean, do you have triggers that sort of set up that kind of real behavior that is just a lack of knowledge versus fraud?

Jack: Absolutely. It's a great nuance and it's something that our Friction Index Dashboard picks up really well. Example I'll cite is we had one of the lenders that was asking for annual income and the type of clientele that they lend to really look at their income on a hourly basis, what do I make per hour and maybe what do I make per month. What they saw was there was a tremendous amount of friction there a lot of time as these people were literally being forced to take their hourly wage multiplied by their weekly wage multiplied by their monthly wage to come up with a gross income wage.

It was a ton of time that our Friction Index was picking up on a lot of edits, a lot of changes that had nothing to do with fraud or malfeasance, but rather around how they were asking the question. They took this feedback, they implemented a tool tip that moved it back to an hourly rate for their applicants to put in and then they did the math and the background and all of a sudden, the friction went down, the conversion went up and satisfaction role went up as well.



Peter: Interesting, interesting. So then, who are the kind of lenders that you're working with today?

Jack: Yeah. So, they span the gamut really from, you know, I would say 550 and above all the way up to prime lenders, both consumer and business, also a lot of the top merchant processors now are using us and with our new relationship with Trans-Union, they are taking us into the interim space to kind of reinvent that digital quote and digital claim process for the interim space.

Peter: Interesting, interesting. So then, I know you haven't been in business a huge amount of time, but....I mean, I'd be curious when someone is hooked, when someone is running your data, running your code, I should say, how many of them just....what's your retention rate?

Jack: Yeah, it's a great question. We joke around internally that once you see it, you can't unsee it, once you have access to this visibility and you know that it's just one partnership away and it literally spans across all your departments to facilitate that collaboration that you need to digitally transform, we have never had a customer that has installed our Javascript move forward as a customer and ever left. In fact, the ones that are on our initial contracts signed multi-year contracts now and continue to see more value as they move from maybe chief risk over to chief marketing and chief product that these insights are invaluable throughout the customer life cycle.

Peter: You don't have lenders that have dropped their originations dramatically, they're still keeping you on?

Jack: Absolutely. Yeah, I mean if you think about it, a lot of their credit risk models blew up during the COVID pandemic and it's going to take time for those historical (garbled) as in to someone's credit risk, as an example. But, if they can have it, if their customer journey is implemented with our real-time behavioral analytics, they can have a leading indicator of if there's any type of anomalous behavior, which is really what they are looking for now, is they slowly build their confidence toward lending again.

One of the things they want to do is not lend out a bunch of money and find out that that was wrong. We can give them the behaviors that are occurring in real-time and help them make better decisions as they recover. What we want to point out is the lenders definitely got hit hard, some harder than others, but other aspects of our customer-base, we have seen massive acceleration on the payment side and the merchant inquiry side as people who maybe had visible and digital properties, they are forced to push everything digital and we've seen account openings just spike, we've seen that at some of the major merchant processors out there.

Peter: Okay. So, say there is a lenders listening to the show and they're interested, what's the process, how complicated is it to sort of just implement your code into their system?

Jack: Yeah, it's a great question. We're on our third generation of our Javascript to ensure that it's super easy and very light. Everyone says that, we actually do it. Our customers can typically



get us up and running in less than one development day so it's a pretty easy trade-off for them to go from not having visibility into their real-time behaviors to literally lighting that up in a day.

The other thing that's happened in the last year that's exciting is our first customers....it took us a while to build the models for them, now, we've been able to do what we call Day One Value. So today, when you install that Javascript, we immediately turn on your behavioral dashboard, the Friction Index Dashboard, and then you also start getting a stream of real-time behavioral analytics that feed a new source of data for your Al and ML models so, literally, day one value when you install it.

Peter: Interesting. So, I guess this is a whole.... another data stream that all the data scientists can pore over and create new models from using this as a new data source, right?

Jack: Absolutely, yeah. Everything that we're measuring and stuff that they haven't been measuring so the data scientist would say that it's orthogonal lift of the model and they get quite excited about that.

Peter: Right, right, So, you know, as we're chatting here, and you know I've been a big fan of what you guys do, Jack.....I mean, when you're in a Zoom call, I guess it would be these days, like a sales call, what are the objections that people and how do you respond to those?

Jack: We're seeing that the market is rapidly adapting behavioral analytics which is terrific, I think, for everybody. It's great for consumers, it's great for businesses. The biggest objection is just development cycles, product roadmaps, you know, prioritizing this integration and even if it is lightweight and most folks are stuck up six months to a year in their debt cycles so it really requires some executive sponsorship so it's really our job to show this behavioral dashboard. Once we do that, that seems to pave the way to getting us integrated and up and running quicker.

Peter: Right, right. So, I know you've got a whole bunch of patents that are pending, I don't know, you tell me, whether they've been improved. You're the only company I know doing this, I mean, it seems to me to be something that will.....you know, once people see or you get it, this type of thing will be standard at some point. Are you protected, what's stopping someone from just taking.... they can see your Javascript and what's stopping someone from going up against you.

Jack: Yeah. So, we do have some really foundational patents in the space which are great, we use those, not necessarily to go after anybody, but to protect our right to do business. There's a pretty big moat around what we do and what we found is a lot of our customers had been collecting behavior. The real challenge is taking that digital body language, that behavior they are taking....you know, scientifically, it's considered a very noisy signal. There's a big difference between how you interact and how I interact online.

Being able to baseline that, being able to surface the meaningful attributes that are the ones that can help you make better decisions, that's really the key, I think the breakthrough we had to



be able to do that in real-time. So, when you think about where the real pinch point is in digital transformation today, we're still having a really tough time landing a customer. You've got one shot to get both the customer experience and the fraud signal right and the evidence is showing that we're still struggling mightily there.

We're trying to strip out all of the friction, but then when we go into the verification process, the amount of verification that we're throwing at customers that requires interaction, a document upload, a bank verification, a picture of yourself, it's so out of the norm of what we would do if we were in person. It's really turning people off and preventing that real transformation to happen. So, we're going to continue to use this patents, develop more patents, as I said, we've got four PhD's on staff and two of the brightest founders in the world so we think we're at the very beginning of this, you know, kind of digital transformation being filled by behavioral analytics and we're going to try to plant our Javascript everywhere we can. (Peter laughs)

Peter: Indeed, I'm sure you are. We're almost out of time, but I'd love to get a sense...maybe an example or two of insights that people have done that have made....we touched on it a little bit, but what I'm talking about is...everyone has the customer journey, what's the theme for improvement like what do people say...everyone is saying, oh, we need to get rid of this, we need to change that or is it really dependent upon whatever kind of lender is doing it.

Jack: Yeah, I think it's a great question. I think there is a collision, a re-occurring collision that's happening every day in every digital lender and that is marketing and CX are trying to take all that friction out of an on-boarding journey so they're asking the customer for very little information. But then, the chief risk officer is getting very little information and kind of having to start from scratch to ask them basic fundamental questions. It would be like, if we were going down a sales process and everything was going well and then I backed up and I said, well first, I need to ask you your name, are you sure that's your name and are you sure that's your address, it would throw everything that we did.

That collision continues to happen everyday and what we see happen once digital companies can see their customer through the eyes of their customer like see the fact-based behaviors that have happened....we've been in rooms where they've said, I told you, you know, the risk officer would tell product who have been trying to get rid of a question, I told you that question wasn't causing any friction and that's an important question for us because they can actually see it in the behaviors.

Vice versa, we've seen the product or marketing teams say that question isn't worth the friction that it's causing so for the first they time they can move away from these internal debates and this guessing and this endless AB testing to a data-driven approach that says, here is what happened descriptively in the customer journey and then they're really good at making calls there now that they're not operating blind.

Peter: Right, right. It goes from a subjective decision to an objective decision....

Jack: Absolutely.



Peter: Okay. So then, what's next for you guys, I mean, you said you wanted to conquer the world. Like in the next 12 to 18 months, what are you guys working on?

Jack: Yeah, yeah. So, the company's accelerating really quickly as you might imagine. Really great people want to work on this opportunity to bring something that's exciting to the market. You've mentioned as well it's horizontally scalable, we can take it to any vertical, any use case where there's digital interaction so next steps will be to continue to lockdown some of the biggest brands in the world across multiple verticals. But, we're also be trying to democratize the technology and take it out so that everybody can use this technology, not just the largest corporations in the world.

Peter: Okay. Well, good luck, Jack, I think it's fascinating what you've guys have done and it's a real service to the industry, I think so. Thanks for coming on the show.

Jack: Thank you very much, Peter, appreciate it.

Peter: Okay, see you.

Jack: Bye, take care.

Peter: As I said, I am a big fan of what Neuro-ID is offering. I think it's something that the industry needs and I think every industry needs if you're operating online. The one thing that I was really....one of the highlights, they've got 100% retention rate since they started because once you see this....you go through a demo and you really see the insight. Once you see...you've got access to this real-time data and you get to see how much real-time fraud is being detected that wasn't detected before.

I think that just shows you that people aren't willing to fly blind and I think it's a testament to what they've done. I think, as I said, this is going to be standard offering online soon, certainly within five years and possibly a lot sooner. It's just something that, you know, you need to know everything you possibly can know about the person on the other end of the screen who is interacting with your website or your app so it's really something that....I'm very bullish on the whole idea.

Anyway on that note, I will sign off. I very much appreciate your listening and I'll catch you next time. Bye.

Today's episode was sponsored by Lendit Fintech USA, the world's largest fintech event dedicated to lending and digital banking is going virtual. It's happening online September 29th through October 1st. This year, with everything that's been going on, there'll be so much to talk about. It will likely be our most important show. So, join the fintech community online this year where you will meet the people who matter, learn from the experts and get business done. LendIt Fintech, lending and banking connected. Sign up today at lendit.com/usa

(closing music)