# THE FUTURE OF LAW

Demystifying AI: What's Hype, What's Real, and What Lies in the Future

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**Demystifying AI: What's Hype, What's Real, and What Lies in the Future**

Successful law firms invest more than others in legal technology that helps them win. Artificial Intelligence is currently one of the most popular buzzwords in the legal tech space. But, what can AI really do for lawyers? What are the different uses of AI, and how do they impact your legal practice? This transcript will help to better understand what AI can and cannot do for you today, and what you can expect in the future.

**Speakers:**



**Josh Becker**
*CEO*
*Lex Machina*

**Daniel Katz**
*Associate Professor of Law*
*Illinois Tech - Chicago Kent College of Law*

**Jeff Reihl**
*EVP and CTO*
*LexisNexis*

Josh Becker:     Hi. Welcome, all of you. My name is Josh Becker, CEO of Lex Machina. We have a huge turnout today. We're enjoying every minute here for our last webcast of the year, our last Future of Law webcast, this one on, "Demystifying AI: What's Hype, What's Real, and What Lies in the Future?"

Successful law firms invest more than others in legal technology that helps them win. Today, artificial intelligence is one of the most popular or common buzzwords in the legal text base. We saw [00:00:30] something on Above the Law yesterday that was saying, "Was it the words of the year as such," but certainly you heard a lot about it.

Today, we're going to really dive into what can AI really do for lawyers? What are some of the different uses of AI today? How do they impact legal practice? What can we expect going forward?

To discuss that with me today, and with all of you, we'll obviously have time for Q&A at the end, as always, we're very fortunate in our panel. I'm very excited to [00:01:00] introduce my friend, Dan Katz. When I first started on this journey six-plus years ago at Lex Machina, Dan was one of the people I looked up to, and was way back then, and before then, has been carrying the banner for the Future of Law. It's just terrific to have him on here.

He teaches legal analytics, e-discovery legal project management, and legal process improvement, and more at Chicago Kent Law School, and has made it his mission to teach law students how to leverage technology [00:01:30] and entrepreneurship in the future legal careers. He's a scientist, technologist, and law professor, but applies an innovative, polytechnic approach to teaching law to help create lawyers for today's biggest societal challenges. He has many awards and acknowledgements over the years, including from the ABA, as a 2013 Class of Legal Rebels, which he very much is. It's a procedures group of change leaders in the legal profession.

Also, very fortunate to have [00:02:00] Jeff Reihl on today. I've had the great privilege to get to know Jeff over the last few years. He is EVP and Chief Technology Officer at LexisNexis. As such, he runs a large global team and is responsible for global

technology strategy, obviously including AI in these areas as well, bringing the company's applications, private platforms, and business systems to help legal professionals work more effectively and efficiently, and achieve better outcomes for their businesses and their [00:02:30] clients.

Before that, he had a number of other roles at Lexis. He has a bachelor's degree in computer science and a master's degree in computer science, the latter from Johns Hopkins University in Baltimore. Welcome, both of you.

Jeff Reihl:    Great being here today, Josh.

Daniel Katz:    Thank you. Thanks for having us.

Josh Becker:    Good. Let's just start out with a bit of an introduction. What we're trying to do is demystify AI, see what's happening and what is still to come, how it will impact your profession, how can we [00:03:00] prepare for what's coming. As we mentioned, there's a lot of hype out there, so we're trying to talk today about what's real now and get to the future stuff at the end if we have time.

What is AI? Jeff, you had a good slide, so we'll try to see if we can bring that one up here and then maybe you can talk to that. I'm hoping that all of you can see that. Jeff, why don't you go ahead?

Jeff Reihl:    Sure. Yeah, as you mentioned, Josh, there [00:03:30] is a lot of hype, and a lot of noise out there, and I think there's a lot of confusion as well. We have a lot of our customers come to us and they ask us, "What is this? How does it really work?" Exactly what we're doing here on this call today.

We've pulled together this slide that we use with our customers. It really speaks to, at least the way that we think about some of the definitions of AI terminology like machine learning, which really helps go through large amounts of data, [00:04:00] diverse sets of data, and the intent is to identify patterns and relationships in that data. One of the things that we're finding today is a lot of this technology was around a number of years ago, but the compute power is available today. It's really bringing this to reality and that's why I think we're hearing more and more about it.

Natural language processing is another term, or NLP is another term, that [00:04:30] a lot of people talk about. That's the ability for an IT system to understand natural language speaking. It can translate your voice itself. Or, if you type in a natural language query, for example into Google, it can interpret that query and understand its meaning and the intent of the query, as opposed to in the past when you used to just type in words and it would do a search against a search engine looking for those words [00:05:00] within a text document.

There's also this concept of deep learning. It uses a set of technologies known as, and methods known as, neural networks or artificial neural networks. Artificial neural networks are really modeled after your brain. It's based on a collection of connected nodes called artificial neurons. As data passes through those neurons, the strength of those connections helped to determine patterns and relationships in [00:05:30] the data. Again, this is an example of where a lot of data really does help. The concept of deep learning is that you have multiple layers of these networks.

Just as a simple example, neural networks are used a lot in image processing, really understanding an image. If a computer sees an image, the first layer of the network might identify that it looks like there's some kind of object in the image that looks like an animal. The next layer might say it looks [00:06:00] like a dog. The next layer might actually come out and say it is actually a cocker spaniel. It has a deeper, deeper learning that it goes through each of these different layers in neural networks.

Then there's advanced interfaces that are out there. We hear a lot about chat bots. We know about Amazon Echo, the ability to take your voice, recognize, translate that into natural language, and then act upon it. You're seeing a lot of new technologies [00:06:30] coming out in that area as well. That's the way we think about some of the definitions of AI. We apply those in the legal domain within our business.

Josh Becker:     Excellent. Very helpful. A crisp explanation of these complex terms. Before we get into how are these technologies used today, or some of the ways they're used today, Dan, do you

have any comments on these definitions? Any other ways that you [00:07:00] explain this stuff to people?

Daniel Katz:     I would say that, first of all, all of them can be used in concert with one another. A lot of solutions you'll see in the market is some combination of a set of things listed here. That's just worth noting at the outset.

I'd also just say even within these, obviously there's a bunch of subtopics. These are very broad areas with lots of stuff that happens [00:07:30] underneath them. I think these are the kind of tools, and then there's the tasks, so the tasks would do things like predict stuff, find things, and you can do strong predictions, and light predictions.

I'd say a light prediction, just to start perhaps, would be, "What are the trends in some area?" That's like a prediction that allows an expert to make a prediction. A strong prediction in this context would be, "I'm going to trade [00:08:00] stocks based on a model that I've developed. I'm going to do that in the future. I'm going to take a model I developed and deploy it going forward." In law, that would be, "I'm going to use this set of data to predict what's going to happen in this case in the future." Versus, "What are the trends in a particular area of litigation," which is also a useful form of insight, but not quite the same.

To do all of those things, you would use some combination of machine learning and NLP, in particular. You might use deep learning. [00:08:30] To make it serviceable by a person, you might say, "Let's put an interface in front of it because the user might say they want to ask Amazon, they want to ask Alexa what's going to happen in this area," or something like that. Anyway, I don't know if that's helpful, but just thinking about how you can put those things together to solve a problem.

Josh Becker:     Yeah. That is helpful. I think that gets us into the next question. But it was funny you mentioned that these things can be used in concert because, [00:09:00] yeah, we had a board member. He would always refer to MLP. We never knew if he was saying, "Hey, you guys really do" ... In terms of what we do at Lex Mach, I never knew if he meant, "You guys do both," or if he just really was confused about the terms.

Instead of using NLP and machine learning, he would always, "Your MLP." We never quite knew. Komal and I would always look at each other and be like, "Does he know what we're talking about?" Anyway, it's kind of amusing.

Let's get into it a little bit. I thought that interesting. You made a differentiation between, [00:09:30] did you call it light prediction? What was the first?

Daniel Katz: Or trend spotting or something like that, yeah. That's a kind of lighter thing, but it's useful. Sometimes telling somebody what the average is very useful if they don't know the average, but you wouldn't want to just use that as the basis of prediction. It would be a starting point at least.

Josh Becker: Yeah. We call it the P word of predictive analytics. We're always sensitive about it here, but I like the differentiation. Really, a part [00:10:00] of this is just mining lots and lots of data that maybe previously attorneys never had, A, had access to, or B, no human could process all 1,500 cases in front of Judge Stark of this type. Part of it is just mining those 1,500 cases to glean any insights that we can get or early trends. Then the second piece of that is the strong prediction stuff that you talked about. [00:10:30] Along these, what are other cool use cases that you see of these kinds of technologies, Dan?

Daniel Katz: I guess if you stayed in litigation or that side of the house for a moment, you'd say, "Well, the client wants to know two things: what's going to happen and how much is it going to cost?" I think being able to forecast how long will this take, how much expense will it have, and what is likely to happen, those are three [00:11:00] predictions. With any prediction, you'd like to say, "Well, here's our prediction and how much variation we might vis-a-vis that prediction." Because you might, say it's going to $100,000 or a million dollars, but you'd like to say plus or minus some amount because the data would tell us that. Your specific estimate might have some variation associated with it, but at least you could give people a ballpark number. Those are three things.

Then just to take one step outside of the [00:11:30] litigation sphere, you might say people are looking, say, in due diligence to find documents of particular types and

characterize them like, "Go into a contract and find the change of control clause." Or in discovery, you'd say, "Go sift through a million emails and find this small subset of those that are relevant to this case."

All of those processes could be done by humans. You could do document by document and have people read them all, but for various reasons, mostly economic, it's not just [00:12:00] reasonable, cost-effective just to use humans for the problems, so we've used technology in various forms, including artificial intelligence, mostly in machine learning.

Josh Becker:       Yeah. I think it is a good use case. Not surprisingly, we just wrapped up our second Legal Tech Accelerator and a lot of the companies were AI in one form or another. But one called Contract Wranglers is doing along the lines of what you discussed. It's mining through documents that traditionally used to be [00:12:30] shove in a drawer, or now some file systems somewhere, to surface those kind of terms. "This contract is coming up for renewal. Do you want to renew?" Or, "This term is about to expire," or something like that. Exactly that use case.

Then your other part I liked. Those are the questions people want to know: what's going to happen; how much is it going to cost? What's your third there?

Daniel Katz:       How long is it going to take? What's the timeline on this? Those are the first three questions. If [00:13:00] you can answer those with the clients, obviously, they love you. It's not always easy to provide. I think if you can give them an answer at some level, the more you could support that with data, I think the stronger it is just from a presentation standpoint at a minimum.

Josh Becker:       Yeah, I think we see that here. Those are some of the core use cases at Lex Machina that we hear from our attorneys. They're using the data sometimes to win business. In the case of pitches, where they're able [00:13:30] to say to corporate clients, "Hey, you were just sued in this kind of case in front of this judge. Here's what the data shows." Then, obviously, you use that data to win cases, too. Some of that still, I've always felt that bang for the buck thing is the Holy Grail that's still out

there. But that's very helpful. Jeff, do you want to talk through, you have a slide here on some of this stuff?

Jeff Reihl:    Right, right, right. [00:14:00] The way that we think about this is an ever-increasing set of technologies and capabilities. We use the staircase as one way of describing it. If you start at the bottom with full-text search, we're all very familiar with that, right? We've been using it for many years, whether it was a legal research product, or Google, Yahoo. But you'd be amazed at how much AI technology is actually in [00:14:30] the search process because the search engine does use natural language processing and machine learning to help improve search relevance.

For example, we use an algorithm called learning to rank as part of our search. That actually helps to re-rank the search results based on prior use of documents in similar types of searches. Even though it may seem pretty straightforward, and simple, and we've been using it for a long time, we are using those AI technologies [00:15:00] in full-text search.

Semantics are the next level up where it's actually interpreting the meaning of the query. As I mentioned earlier, letting users type in natural language query and have the system interpret what they're doing within the context of the work that they're doing. Or through personalization. That we know, for example, an attorney is in California. We can automatically give search results [00:15:30] specific to his or her jurisdiction.

As you go up the staircase, data visualization. With the massive amount of data that we're all getting on a daily basis, particularly in the legal profession, how do you make heads or tails of it? If you perform a search and you get 10,000 results, what are you really going to do with that?

With data visualization, you can present that data in different ways. You can summarize it. You can present it in charts and graphs, [00:16:00] scatterplots. Even better, you can start interacting with that. You could start doing what-if statements and really try to figure out, and play with the data, and interact in a very different way than just looking at search results, and cases, and legislative materials from a search result.

The next tier up is analytics. We've been talking a bit about that. The way that we think about it is the discovery, interpretation, and communication of meaningful patterns within data. Then in legal research, [00:16:30] discovery is a big challenge because a lot of the data that we deal with is freeform texts like cases, dockets, legislative materials. The first thing we have to do is go through all of that freeform texts and those documents using natural language processing. We can identify the judges, the attorneys, the courts, the companies, the settlement amounts.

Once you have all of that, then you can start performing some of the analytics that, Josh, you and Dan [00:17:00] were both talking about. How long will this case last? You can ask questions like how opposing counsel has performed in similar cases in front of a specific judge. How has the judge ruled in different or similar cases to yours? What have past settlements been, and when should I settle, and what are the range of settlement amounts in these particular cases?

These types of analytics are what we describe or talked about as descriptive analytics. They're describing things that have happened in the [00:17:30] past, but the ability to summarize and present that data in different ways is very important.

Then before, Dan was talking about predictive analytics. That's really going to the next step. Based on a lot of this data, how do you predict outcomes? An example of one of our products that we offer is called Legislative Outlook. What it does is it predicts the probability that a bill going through the legislative process will become a law, which is obviously very critical [00:18:00] for companies to understand if the bill going through Congress is going to negatively or positively impact them, and they can use their lobbying dollars the way that they think may make the most sense.

Then when you get to the top, it's probably the most sophisticated and complicated technology is really what we call cognitive computing and the machine learning we were talking about before. This is where it takes and it combines a lot of these other technologies because it does have natural language processing [00:18:30] to really understand the types of questions that the end user may be asking. What's very

interesting about these systems is that they improve over time. With more data and more end user interaction, these systems can learn and now provide better results as usage and as more data comes in.

An example of how we use these types of technologies are we can actually allow the user to ask a question like, "What are the [00:19:00] elements of negligence?" Based on that, not only can we find the best answer within millions of different documents, but based on understanding the user, we can go a bit further. If we know that that user, again, is in California, we can give the legal definition or the elements of negligence for the state of California.

Very sophisticated technology, which allows you to answer the types of questions that a typical, basic search engine could never answer [00:19:30] in the past. Those are just some of the examples that we have.

Josh Becker: Cool. Yeah, that's great. I think the more we can make this concrete for folks, the better. I think, Dan, to your point, there are some folks who really want to dive into it. We see some firms hiring data scientists, which we can talk about later. I know one partner at a law firm that actually, a major law firm actually, went back to school and got a data science degree because he was so [00:20:00] into it. But many do not. Many, they just want the answers. Many people are like, "Help me find what I'm looking for." Right? To your predict stuff and find things.

Obviously, I'd like to hear more about how you're training lawyers of the future. Maybe two things. How are you training lawyers of the future in your classes to understand these technologies? Then what recommendations do you have for [00:20:30] those on the call maybe who are already out of school, but are interested in learning more about this stuff? What advice do you have for them?

Daniel Katz: Well, maybe I'd start just talking about what we're doing here. I teach at Chicago Kent. It's a College of Law over here in downtown Chicago right by the Sears Tower, so stop in some time if you want to say hi. We're the law school of Illinois Institute of Technology. That is a very [00:21:00] strong thrust of what we're doing at the law school here. My first job was at

Michigan State. Part of why I came here to Illinois Tech, to Chicago Kent, was because of this longstanding interest in technology, broadly stated vis-a-vis law.

Some of the classes we're teaching, I mean we're looking for a competitive edge for our students. When we look out at the marketplace, we think that basic technology competency, that's one thing we think is helpful. We think [00:21:30] that people that are good project managers and understand process better are going to be able to more effectively serve their clients, and so we teach a class on process improvement and legal project management. It's taught with Kim Craig, who is at Seyfarth Shaw. It's a well-known firm for those particular topics.

I teach a series of analytics classes, starting with basically what's an average, all the way up through into machine learning over a one-year sequence. [00:22:00] The idea is to try to give people a strong foundation so they can continue to teach themselves. There's no way to give somebody a full diet of all of these things in a very short period of time.

What I would say to practicing lawyers on the phone, or people who are running law firms, is you don't necessarily have to be able to do all these things. You have to see how they fit into the broader symphony. If you need a cello player, go find a cello player.

I think that that's our theory here is that we're trying to create lawyers that have these other [00:22:30] special skills, let's say, that we think are going to be useful. I'm happy to say more about the ways in which they might be useful, but I think that's our theory of the case, and we're seeing, you mentioned, Josh, a number of firms that have interest in trying to find some folks with this type of background. I think because it solves business problems for their clients.

For people who are currently practicing, again, you can either get folks around you who can help fill some of this void. To [00:23:00] the extent you perceive that there's a void, I think there is. It's never been easier, in some ways, to learn about some of this stuff, given the amount of online research to support people's knowledge in this area. I'd be happy to talk to anybody if they want to message me directly about

some stuff that they could do to learn more about this. But anyway, those are just some thoughts about the topic.

Josh Becker:    Good. Well, that's very helpful. Maybe again towards the end we can come around to that in the Q&A. If people would like information, [00:23:30] let us know. Since you just put it out there, we can take advantage of that.

Daniel Katz:    Alright.

Josh Becker:    But I do want to commend you, Dan. You've been a pioneer. Now, we finally start to see a broad number of law schools in recent years start to take on some of these classes, but you've been a pioneer now for many years.

Daniel Katz:    Still a minority, but it's growing. It is growing. Probably two dozen at least law schools now.

Josh Becker:    Yes. Slowly, but surely. But you've been a pioneer [00:24:00] and a leader. It's been tremendous. One thing I want to make sure we cover ... And we'll probably open it up for Q&A around five minutes, so you can start typing in questions and we'll work to get them in. One thing I want to say is there's a lot of hype around a robot lawyer. This is a topic the press loves to write about.

    Like I said, we try to stay out of that. We feel like we're, here at Lex Mach, we're about serving up information [00:24:30] to lawyers to help them just drive data-driven decisions. That's the way we really talk about it. Less than a sense of predictive analytics, more data-driven decisions. We're mining all this data for you to tee up these trends, as you say, or trend these data points, and then people can make data-driven decisions. But, again, there's still a lot of hype around robot lawyers and such.

    I think, Jeff, you have one last slide here. Maybe you can talk to that first.

Jeff Reihl:    Sure. [00:25:00] The way you described it there, Josh, is exactly why Lex Machina is part of LexisNexis today, because that's absolutely in line with our thinking, is we don't envision AI in any way, or other technologies, replacing lawyers. But we do see AI, and data analytics, and other technologies and

tools, they're really to help the productivity and the effectiveness of our end users and lawyers. We continue [00:25:30] to see lawyers and firms performing very complex legal tasks that require human skills, human interaction with your customers and your clients.

What we do see AI doing is automating certain functions that are repetitive. They're high-volume tasks, low value, so that attorneys can focus more on the high-value, strategic work. That's really what our intent is. That's where we see that going.

A lot of our tools, as you saw a little earlier [00:26:00] on the prior slide, are really focused on enabling the attorneys to make better decisions. We do not draw conclusions. We don't tell you how to do your job. What we do is arm you with the information that you need that you can be more efficient and then also make better decisions as Josh was mentioning before. That's where we're going.

I think it's a very exciting time because, again, with all the different datasets and content that's out there, [00:26:30] there's a lot more that can be done to simplify the legal research effort that has historically been search a big database, look through 200 cases to find all the information you need. There's better ways to do that now.

Josh Becker:       Sorry. I had it on mute there. We're starting to get some good questions in, but I wanted to cover one other topic [00:27:00] first. That was very good, Jeff, to I think level-set where we are today. But are either of you willing to venture some guess for the future, where this is going? If not full robot lawyers, what are some innovations that we're will likely to see in the next two to four years or beyond that?

Jeff Reihl:       Dan, do you want to start?

Daniel Katz:       Sure. I would just say one thing about it's [00:27:30] tricky with all these problems to say what the labor market effects are likely to be. I think, if I could just maybe slightly repackage Jeff's take a little bit, it's going to replace certain types of lawyer tasks. The question is whether there's substitute tasks to fill the total amount of work being done today.

An individual lawyer might be able to move up into higher-value work, but the question I think that people are thinking is, "What does it mean for the total number of lawyers that we currently have [00:28:00] working?" I think that's a different thing than saying, "A given lawyer may be able to slide up or down, or reconfigure a set of tasks that they're doing."

If you look at other fields where we've already had a lot more automation and a lot more structuring of information than this field has had, say like finance, there's lots of people that work in finance, but the skillset has changed quite a bit over the last three decades. I think that's not a bad overlay to what lawyers [00:28:30] do, like highly-compensated professionals that basically are easing their expertise together with some sorts of information and technology systems. There, I think, it wasn't neutral in the labor market, certainly for people who had certain skillsets and couldn't adapt. It was not a completely neutral exercise.

I do feel like I should say that, and that sort of thing looks a little into the future, but I think if you look at litigation, you would say [00:29:00] trying to develop systems that eliminate the problems in the first place, or learn from the problems we've had and back-feed those into monitoring systems that try to eliminate some, but not all, of the problems that we experience, I think that's probably the biggest and hardest problem in law. A guy named Ron Friedmann, some of you may know, says, "Do less law." But the idea is to try to solve for the problems that lawyers are currently the solution. Then in litigation, we're often solving [00:29:30] something that's already gone wrong and trying to clean it up. But the question is what of this could have been avoided?

Then on the transactional side, I do think blockchain technology [inaudible 00:29:39] in and out of contracts, some people are calling it. Removing transactional frictions that currently exist is not going to be neutral for lawyers because lawyers and accountants make tremendous amounts of money off of the existence of these frictions. I don't think that that's neutral, either.

I think people can find other places [00:30:00] on the value chain, but I do think that this is not, and maybe I'm the pessimist here, I don't think this is a neutral exercise, what

we're going through. The question for every person on this call, and more broadly, is how can you leverage these trends as they play out to position yourself for success and future-proof yourself? I think that's within your organizations. I think that's the challenge. I think there's lots of opportunities associated with it, but it's not a neutral exercise. I'll get off my soapbox now.

Josh Becker:     [00:30:30] No, it's helpful and it really responds to-

Jeff Reihl:      Yeah, and-

Josh Becker:     Sorry. Go on, Jeff.

Jeff Reihl:      No, I was just going to add some thoughts, but go ahead, Josh.

Josh Becker:     Oh yeah. As you're saying, that response, actually a few of the comments we got that are starting to come in, some saying, "Is it naïve to believe that AI will not devalue some work of attorneys?" I think, Dan, you addressed that to some degree.

                 A couple of other comments are on those kinds of observations and [00:31:00] whether our panel has any comments about his observations, the future of law in an AI world, and how far he goes. Why don't we take that for a moment? Jeff, maybe you were going to respond as well. Dan, I'm sure you probably know Richard. I have actually not met him. Of course, I read his work. Any thoughts on that from either of you?

Daniel Katz:     Oh, go ahead, [00:31:30] Jeff.

Jeff Reihl:      Yeah. In terms of I agree with Dan, that ultimately this is going to replace different types of tasks. Because a lot of that can be automated. Dan gave an example earlier in the due diligence process where you can automate a lot of the contract review. We are going to see certain types of tasks like that, but again, positioning yourself to have a role [00:32:00] in the future, and how do you leverage these technologies to become more effective in your role within your firm. I definitely agree with what Dan was saying.

Josh Becker:     We're starting to get some other questions asking for some specific ways law firms, law departments, and governments agents already utilizing AI. There was one also about judge bias. That one there. [00:32:30] I don't see it on the screen right now. Maybe we can come back to that. I think we tackled this in some ways.

Again, the way we think about it here in Lex Machina is, "Get the case, win the case." For us in the litigation world, it's about helping people use data to win business from companies. On the flip side, companies then use data to analyze law firms. They're trying to figure out, "Great. Who's got the most experience in front of this judge in these kinds of cases, [00:33:00] et cetera?" They can look at the client list now and make some judgements themselves about who they might want to work with. There's that data, and that piece, and pitching business and, on the flip side, evaluating law firms.

Then there's win the case, which is when the companies and law firms are working together using data to figure out, "What's the right strategy from this judge? A, do I want to be in front of this judge in the first place? Would I rather be somewhere else? Do I want to try to transfer? Then let me see 10 transfer [00:33:30] motions, the last 10 motions of this type that have succeeded in front of this judge and the last 10 transfer motions that were denied by this judge." Then I can hopefully use that to most effectively win my transfer motion and then, so on and so forth, to go on and win the case. Those are some examples that we see here. I think there are some other specifics that were given around contract review and some other areas.

Someone did write, "Where should I look to learn more about AI? What resources [00:34:00] are reliable?" Dan, you addressed this a little bit. Any thoughts there? Dan? Did we lose Dan?

Daniel Katz:     Sorry. I was on mute. I was on mute. My apologies. AI in general, there's quite a bit. There's the American Association for Advancement in Artificial Intelligence. I can't quite remember the acronym. They have a bunch of stuff [00:34:30] on their website that's pretty useful.

There's a range of technical introductions and simple introductions. I have, personally, a large number of slide decks that I've put together and course materials, starting with for my classes, which you can find online. Just Google my name and you can find them. There's also courses that you can sit in for free online from a bunch of great universities, if you want to really learn quite a bit more about it.

I did want to say [00:35:00] one other thing that was in, I think it's in the New York Times today talking about explanation in artificial intelligence. This is a challenge in the field, which is we have systems that at times have difficulty explaining the basis of their explanations, particularly a challenge with neural nets, historically speaking. To the extent that we're going to make a decision, it's challenging sometimes if you can't articulate the basis for your explanation. But that one place has come up in bail, whether to give people [00:35:30] bail or not based on an algorithm, for example. It's worth just putting that out there, I think, for a moment.

Josh Becker:   Mm-hmm (affirmative). Yeah, that is good to see that. Also, if people want to email me, jbecker@lexmachina.com, there's some resources that I could send. Actually, Jeff Pfeifer, who kind of lead the product at Lexis, came up with a good glossary of terms piece recently that I could send around if folks are interested.

[00:36:00] A lot of other questions. Just see what we can get here in the timeframe. There's a question about what we've seen out there for transactional lawyers. Dan, you talked a little bit about this around contracts and blockchain. Any other thoughts on that around the transactional lawyers?

Daniel Katz:   Yeah, there's a set of first-generation stuff. It actually parallels a [00:36:30] lot of what that stair step that Jeff had put together. There's a lot of, if you think about a deal, just find information. Find the change of control clause and characterize it. Find the assignment clause and characterize. That would be a classic thing in M&A or in diligence more generally.

Then people are interested in second-level stuff, which is, and this is reflected in things like playbooks, "What's our first position? What's our second-best position? We've negotiated

[00:37:00] in front of this person before. Where do we think that they'll land on this particular provision?" A lot of people are interested in that. That requires better mining of deal documents and your markups of your deal documents.

There are a number of companies in that space trying to do that type of work. It parallels a lot of this, "What will the judge do?" In this case, it's, "What is the counter-party going to do?" But there's a lot of similarities to it, if that's helpful. I could say quite a bit more about it.

Jeff Reihl:     There are tools out there [00:37:30] that will look for conflicts within contracts. If there's a set of phrases in one paragraph, another set of phrases in a different paragraph that contradict each other or aren't comprehensive or complete. There's a lot of tools that are coming out in this area. "How do the phrases in the contract compare to my approved phrases?" A lot of that, again, I think will simplify and [00:38:00] help accelerate the contract review process.

Josh Becker:    Yeah, the whole deal, right? The whole deal, a lot of it is just information management problems, especially these large deals. It's just people are swimming in information that's unstructured and they need a way to structure it somehow.

Jeff Reihl:     There are very simple examples out there. If you're a large corporation, you have thousands of contracts that you're maintaining. How do you keep track of when [00:38:30] those contracts expire and what your responsibilities are under the contracts? It's impossible. You can have these tools summarize all of that for you and highlight the areas where you've got a contract that's up for renewal, that's going to expire, and you've got to do something about it. It's almost impossible to manage that manually. There's a lot of great tools coming out to help that kind of process as well.

Daniel Katz:    People say stuff like, "Hey, there's been a geopolitical [00:39:00] event in X country. How much exposure could we have? Let's look at our agreements to see can we get out of those agreements, what exposure do we have? There's been a change in a currency somewhere. How much exposure do we have to contracts that are denominated in these currencies?" Anyway, there's a million of these types of

problems. Brexit, actually, was an example where we saw a lot of people trying to figure out what it meant.

Jeff Reihl:     Yeah. Certain companies do business, gets acquired by another [00:39:30] company that you're a competitor with. All kinds of things like that.

Josh Becker:    Good. I mentioned Contract Wrangler earlier. Also, LawGeex is a good one that's helping people also look for clauses, and common documents, and do that kind of document work more quickly, efficiently. That might help answer that question as well.

Daniel Katz:    I'll put in a small plug, if I can, for my own company, LexPredict. We've built an open source solution [00:40:00] similar to those other things in the market like LawGeex, and Kira Systems, and what have you. It's called ContraxSuite. You can find it at GitHub. The code base is there, but it does a lot of those same things. It's a set of tools that allow people to do these types of tasks.

Josh Becker:    That's perfect.

Daniel Katz:    There's a lot of stuff in the market.

Josh Becker:    That's good. That's perfect. You and I need to sync up because I hadn't heard of that specifically. I know that you're doing a lot of cool stuff, but someone did ask specifically about open source tools available [00:40:30] to customize for in-house lawyers. It sounds like ContraxSuite would be perfect for that.

Daniel Katz:    Yep. You can go to ContraxSuite, it's C-O-N-T-R-A-X, ContraxSuite.com and check it out. Go to GitHub and check it out.

Josh Becker:    Cool. Just before we wrap up in a few minutes, Dan, you did mention your contact info. If people want to reach out to you, what's the best way? [00:41:00] Actually, we do have it on the final slide here.

Daniel Katz:    Oh, good.

Josh Becker:    That may have contact info. Okay. Email is on there. Good. People will have that.

We'll wrap up a few other questions. Someone asked about emerging markets. Does that represent a different type of challenge for a Lex Machina technology, specifically? The answer is we're very focused on U.S. law. We still have a lot to do. We've actually done a lot this year, so we started out an IP, as many folks know, [00:41:30] and then moved into securities and antitrust last year.

This year, it's a marriage that we've been working on for a long, long time: commercial, employment, product liability, bankruptcy. It's still a long way. We'll hopefully do our first state this year, a state court. But a long way to go in the U.S. before we tackle emerging markets. We do hope to get there at some point.

A couple questions that I found really interesting. One is do we see AI as an empowerment tool for the public, in [00:42:00] addition to being helpful to law firms and companies? I know they're asking can AI help identify trends that show a judge is biased or a trend of the same actors across cases. I do think it can be an empowerment tool for sure.

Lex Machina was actually started as a public interest project at Stanford Law School for three years for this exact reason: to provide open transparency to the law. [00:42:30] We have a fundamental belief that the more transparency and better data, more transparency leads to more justice, increased justice. I think absolutely once this data gets out there more and more, in more areas of the law, that it can be an empowerment tool to give people more visibility into what's actually happening in our legal system.

You can certainly track the same actors across cases. That's a fundamental use case of our technology and of legal analytics, [00:43:00] I believe. In terms of showing judge biases, I don't know if you could say a bias in particular, but what data can do for sure is show if a judge is an outlier compared to his or her peers in certain areas. Once that judge is identified as a clear outlier in certain areas, then it's

certainly fair to ask, "Are there biases involved," and to dig more deeply into that.

A couple of thoughts [00:43:30] of mine on those topics. Any of you guys want to wrap up on that topic, that AI is an empowerment tool for the public? Or other quick comments? We've got one minute left. Any quick, final comments?

Jeff Reihl:  Yeah, one thing we haven't really talked a bit about that we're exploring within LexisNexis is the whole interface aspect of it: chat bots and the ability to assist in the legal process. If you can actually interact with [00:44:00] the system, and it can help guide your research, that's an area that we're looking at and we've got some of that in front of some of our customers just to get some feedback.

Before I mentioned Alexa, or the Amazon Echo, and we've got examples where we've given Alexa a legal skill that can actually answer legal questions, can report the recent legal news. It's pretty fascinating to see how well [00:44:30] Alexa can actually interpret with our technology behind the scenes, actually really answer those questions.

Again, that's something that we have out there as a separate interface, but I was at the Amazon AWS conference last week. They're talking about putting Alexa into cars where you can imagine a lawyer going into the office, and really talking to his car about getting access to a particular case, and have that ready for him [00:45:00] in his email or her email when they get to the office. Those types of things are not far off. I would expect to see those on the market in the next coming years.

Josh Becker:  That's cool. I did see the Alexa demo, actually, now that you mentioned it. Is there a place where people can go if they want to check that out and play around with that? Is there a place people can go?

Jeff Reihl:  If they're interested, send me an email, because we can get you access to that as part of the customer testing we're doing.

| Josh Becker: | Cool. Great. Your info is here as well. [00:45:30] Great. Well, thank you. Jeff, Dan, any final comments here for our audience, final thoughts? |
|---|---|
| Daniel Katz: | Oh, gee. I don't know. I think it's a really exciting time. Even if you haven't learned a ton or a lot about this yet, and you're just starting to check it out, it's a great opportunity, particularly to merge your legal skills with some of these technical skills. |
| | In law, you don't have to outrun the bear. You just have to outrun the others. Most people aren't that [00:46:00] technical in law, so you don't have to do that much to distinguish yourself. That's the story of my life. |
| Josh Becker: | Well, thank you. Again, you both have been pioneers, but that's a great closing thought. We sometimes talk about legal analytics giving different law firms a competitive advantage, or different companies a competitive advantage, but you're right. I think we're still at the point where having any of these technical skills gives individual lawyers for sure a competitive advantage. Thanks for all you're doing [00:46:30] to train the next generation, as well as the thoughts you've given us here today for this generation of attorneys. |
| | I want to thank both of you. It's been a great year of webcasts. I want to thank the team at Lex Machina for helping us produce these. They are all available online. You can check out some past ones, if you'd like. Thank you all for the great questions and have a happy holidays and great New Year. |
| Daniel Katz: | Thanks a lot. |
| Jeff Reihl: | Thank you. |