

How NLP Logix Leverages AI, Machine Learning, and Automation to Overcome Real Business Challenges



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CEOCFO: *Mr. Willich, would you tell us the focus at NLP Logix?*

Mr. Willich: The focus at NLP Logix is **automation**. When I say automation, what we do is teach computers to do what humans can do or want to do.

CEOCFO: *What are the challenges in getting artificial intelligence right?*

Mr. Willich: It is definitely not simple. Our mantra is that data science, the core of artificial intelligence and machine learning, is really a team sport. You need three specialties working together to deliver powerful enterprise solutions. You need software engineers, mathematics and statistics professionals, as well as machine learning engineers. Those three skill sets combined with advanced computing tools are what it takes to develop and deploy an effective AI system or solution.

CEOCFO: *How do you get the various colloquialisms coordinated?*

Mr. Willich: It comes down to very, very, large data sets. For instance, we have a product where we have trained computers to read document images and extract certain pieces of information from these documents. To do this, we use tens of thousands of images to train the computer to see and extract exactly what you are looking for. In regards to things like regional colloquialisms, the way to overcome any variances is through showing the computer enough examples of what you want it to overcome along with the correct answers for overcoming it. For example, if we trained a computer to understand different types of names for big sandwiches across the US, whether it is a submarine or a hoagie, we would give it examples of all of those so that the computer understands that those are one and the same thing. Just as humans know they are the same thing because we have heard it so many times.

CEOCFO: *Would you tell us about the product you offer?*

Mr. Willich: We deliver custom solutions for our customers, in addition to our suite of vertical market solutions. An example of a custom automation is a solution we provide that reads and codes large quantities of medical records for healthcare providers. NLP Logix has also delivered a custom solution for the Florida Poison Information Center Network; the solution is a collection of detection algorithms that searches for anomalies and trends within their electronic health record system. We also have three out of the box products; one called, [SCRIBE FUSION™](#), which can read and extract information from document images with almost twice the accuracy of traditional optical character recognition (OCR). We have three patents pending on the core technology and will be releasing a new handwriting feature this year. We also have a staffing solution called [MatchPoint](#), which automates recruitment tasks ranging from sourcing candidates to reaching out via text to gauge a potential candidate's interest in a job. The last product we have developed over the past five years is a debt collection application that scores the probability that someone will pay an outstanding debt. We have a number of enterprise collection clients and we currently score about \$6 billion worth of delinquent accounts per year and have delivered an average recovery increase of 5-7% to our customers. All three products are available and gaining traction in their respective industries. NLP Logix custom solution line of business is also taking off as more companies begin to automate tedious, repetitive tasks.

CEOCFO: *Regarding the debt collection product, what are you looking at that others do not take into the mix?*

Mr. Willich: For years, the industry relied heavily on credit bureau scores and credit bureau information for debt scoring. This information is great for telling you who probably can pay a debt, but it won't tell you who will pay a debt. That is a big difference and NLP Logix algorithms help identify those individuals who are more likely to pay their debt. If you have thousands or tens of thousands of accounts that are being collected by large debt collection companies, we train the computer to look for the features of people that pay their debts. When you have new accounts with debt to pay, you can match them with other like accounts. Some of the features are things like the size of the debt, and the age of the debt. We will also geo-locate all of the consumers to a census block, so you can bring in average income, average home ownership, and the percentage of single or dual income households. There are a lot of public data sets out there and when you combine them with these, the machines will pick up combinations and it can really drive ROI for our customers. On average NLP Logix delivers a 5% to 7% lift over credit bureau-only scoring techniques. I should note that the industry is very heavily-regulated and we work incredibly close with the legal departments of our clients to make sure we are compliant with all applicable laws and regulations.

CEOCFO: *What about something that is not typically considered?*

Mr. Willich: Over the years, we have had many "aha" moments working with our clients, when a singular feature turned out to be the most predictive of a certain behavior. An example I like to use is a retail client with a need for cost effective direct marketing campaigns. The client offered their customers a loyalty program in order to collect their information in order to market to them. Intuitively, you might think that distance a consumer lives from the store would be the most important feature on whether the consumer will respond to an offer. However, the more important feature was if the consumer gave the company their

email address, which did not have anything to do with the customer's distance. In other words, the consumer wanted to engage with the retailer and the way they communicated that was by providing the email address. This feature was identified by the machines, after being trained on thousands of accounts, and completely changed the retailer's marketing approach.

CEOCFO: *Is that something that you are more likely to detect due to the quality of your people?*

Mr. Willich: Absolutely, we are very proud of the team we have built over the past eight years. We have also developed proprietary tools that allow us to compete head-to-head with other larger machine learning and AI companies, and we are faring quite well. You are not going to find a better team out there to deliver these types of solutions.

CEOCFO: *NLP Logix works across most industries. Are there particular areas of focus or types of projects that are of more interest for you?*

Mr. Willich: Currently, the automation of repetitive tasks is really low-hanging fruit for us. [SCRIBE FUSION™](#), the document data extraction application is a big focus right now because it solves a problem facing many industries. If you have humans looking at droves of documents and manually entering that information into another application, it only makes sense to automate that process for efficiency and error reduction alone. That is the type of business we are looking for where we can deliver big ROI from powering their business with intelligent automation.

CEOCFO: *Would you tell us about security?*

Mr. Willich: We hired [OnDefend](#), a Jacksonville-based cybersecurity company, to work with us to make sure we are maintaining a highly secure environment to protect not only our data and intellectual property but our customers' data as well. We have known their team for over fifteen years, and are confident that they are the best in the business. In the end, you can't be an expert in everything so we let [OnDefend](#) focus on cybersecurity, while we focus on delivering world-class AI products and solutions.

CEOCFO: *How do you reach out and how do potential clients find you if they are looking?*

Mr. Willich: We built the business over the last eight years based on word-of-mouth and referrals from our existing customers. In 2019, we are going to be making a big push to step-up our marketing game, including attending conferences and doing more targeted marketing campaigns. In addition to targeting companies that want to automate areas of their business, we also want to get the message out to debt recovery companies and business process outsource (BPO) organizations that we can deliver significant ROI.

CEOCFO: *Where has machine learning not penetrated yet?*

Mr. Willich: Companies that are hiring a large number of employees to perform repetitive tasks. Most of these tasks are sent offshore because you do not necessarily need highly paid US-based folks to execute them. That is a prime opportunity for automation. Anywhere that you have humans reading documents or interpreting images, those tasks are also ideal for automation. Machine learning is only going to grow in popularity, as more companies realize the positive. In some cases automation is replacing humans, however, more often it gives organizations the ability

to shift their skilled labor from mindless, tedious tasks to higher value activities.

CEOCFO: *What surprised you as NLP Logix has grown, evolved, and achieved success?*

Mr. Willich: What has surprised me the most is how slow it was as few years ago for companies to embrace and adopt machine learning. Seven or eight years ago, it was hard to even explain to people the benefits and how business functions can be automated, versus over the last three years with how quickly organizations are realizing their need for automation. I have been in business for thirty years and usually changes in technology adoption does not happen that fast but I see it really accelerating much faster than I would have ever expected.

CEOCFO: *Why choose NLP Logix?*

Mr. Willich: Choose NLP Logix to provide automation solutions that deliver real ROI! With more experience than just about anybody out there, our AI solutions will turbocharge your business.

