NLP LOGIX

Experts in Predictive Modeling and Machine Learning

The Next Generation of Debt Recovery

Optimal Use of Behavior Modeling to Increase Revenues

Contents

No Longer "IF" but "When"

A shift in thinking must occur for the debt recovery industry. It is no longer a matter of "if" a company should use their data but a "when," and the time is now. It is also equally important to know "how" to use data relationships and critical information to increase your bottom line.

Both the data storage and the data processing capacities have grown tremendously, to the point where it is now profitable for businesses to use machine learning. When recovery companies leverage advanced analytics and machine learning it will revolutionize the industry's approach to recovery.

A typical debt recovery process focuses on the static process using semi-insufficient data from credit bureaus in hopes that it will produce results. What if we told you those hopes could be turned into actionable means and revenues by implementing machine learning and predictive modeling into your recovery approach.

Most businesses today have collected a large and disparate amount of data over their years of operation and may not have the technical and human resources to leverage it. Be sure you are not leaving that value on the table—value that can provide better financial results for the company. Businesses must realign ways in which they are collecting the data, come up with a plan, build the right model and connect them together so actions can take place in the business.

According to a 2014 study by Accenture and General Electric:

84% of the companies surveyed believe that big data analytics could "shift the competitive landscape" for their industry within the next year.

89% believe companies that fail to adopt a big data analytics strategy could lose both market share and momentum.

A Shift in Thinking

Organizations globally will need to meet the challenge of having 44 times more data year-over-year for the next decade, according to the International Data Corporation. This means we should retrain our thinking to understand how leveraging this amount of information can lead to the creation of possibilities that can uncover patterns and produce insights for a variety of industries.

Organizations are now forced to look deeper into their data to find new and innovative ways to increase efficiency and competitiveness. With recent advances in science and technology, particularly in machine learning, organizations are adopting larger, more comprehensive analytics strategies. Businesses must realize that their competition is going to be learning more, so they will need to do the same, otherwise they will be left behind.

The optimal use of big data through machine learning creates a level of personalization and targeting that cannot be matched by the typical marketing methods. It can provide real time results to change those methods and creates the opportunity to surpass your competition and benefit your customers.

Business leaders will need to shift their mindsets and develop a skill to ensure that data is sourced, structured and deployed into strategic marketing decisions.

NLP Logix at the Core of Predictive Analytics and Machine Learning

Organizations are beginning to tap into increasingly sophisticated analytic techniques to improve opportunities for growth, innovation, and competitive advantage.

It's important to differentiate that machine learning is data driven while predictive analysis is use driven. Predictive analytics is a branch of machine learning. In both, we must clearly define our business goals.

The comparison between the two is not so much a comparison but a critical relationship between the two methods with common objectives. Each is used to determine a predictive model. These models will then be used to identify behaviors based on the data and give a predictive score.
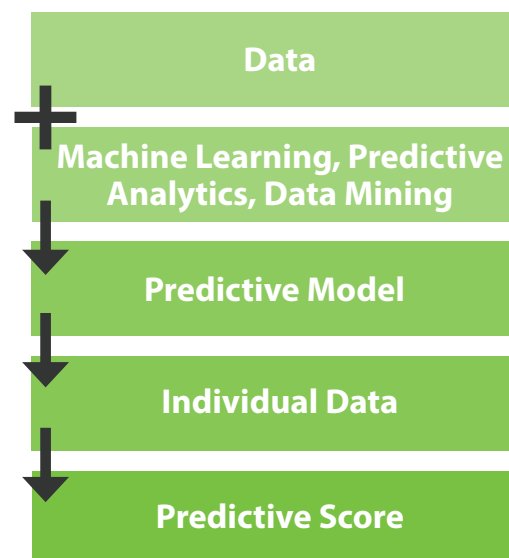
Predictive analysis can help companies make better decisions and reduce costs. Data extracted allows companies to:

- increase revenues
- simplify processes
- achieve specific objectives
- boost employee productivity

Applications for machine learning are virtually endless. In the debt recovery industry, machine learning and predictive analytics can allow a platform of real time personalization, learning from customer behavior, and adjusting to gain the optimal response, leading to a conversion.

Why settle for not knowing 10-30% of your results when trying to increase your recovery? Use a customized approach and build a model specifically designed to improve recovery rates, reduce reserves, and focus your capital appropriately for growth.

NLP Logix, is an internationally recognized leader in delivering machine learning and artificial intelligence solutions. The Jacksonville, Florida-based company has scored over $500 billion in recoverable debt and delivered an average of 5% increase per account over traditional modeling methodologies.

Data

Machine Learning, Predictive Analytics, Data Mining

Predictive Model

Individual Data

Predictive Score

Big Data and the Trending Term

The hype of *big data* will persist and it will become a bigger part of everyday life simply because of the trending economics supporting it.

Bernard Marr, founder of Advanced Performance Institute and a leading global expert on big data, presents his theory:

"Most of the emerging technologies like autonomous vehicles, machine learning, and the Internet of Things, all produce and rely on ever-larger quantities of data.

The problem is that the ability to properly analyze big data and draw conclusions from it is not keeping pace with the rate at which it is being created. Only 0.5 percent of the data we create is ever analyzed and used.

Imagine the potential that exists in even another fraction of that information? Just a 10 percent increase in data accessibility will result in more than $65 million additional net income for a typical Fortune 1,000 company."

Marr's position clearly supports that it becomes critical to leverage this data in the most valuable ways in order to make businesses prosper.

This new approach to data management and technology is calling for an ongoing "discovery" approach, rather than a static blueprint.

The approach **NLP Logix** takes using Machine Learning can help you gain an advantage over the competition. We precisely score every account, every day, providing a real time look at an ever-changing probability.

Analytics and predictive modeling creates a comprehensive look at the data and the data relationships. This allows companies to discover data and information on daily basis using a model specific for the industry and its specific relationships, yielding a measurable increase in recoverys and a decrease in operating costs.

Leveraging the changes in probability also allows the company to achieve the highest likelihood of recovery.
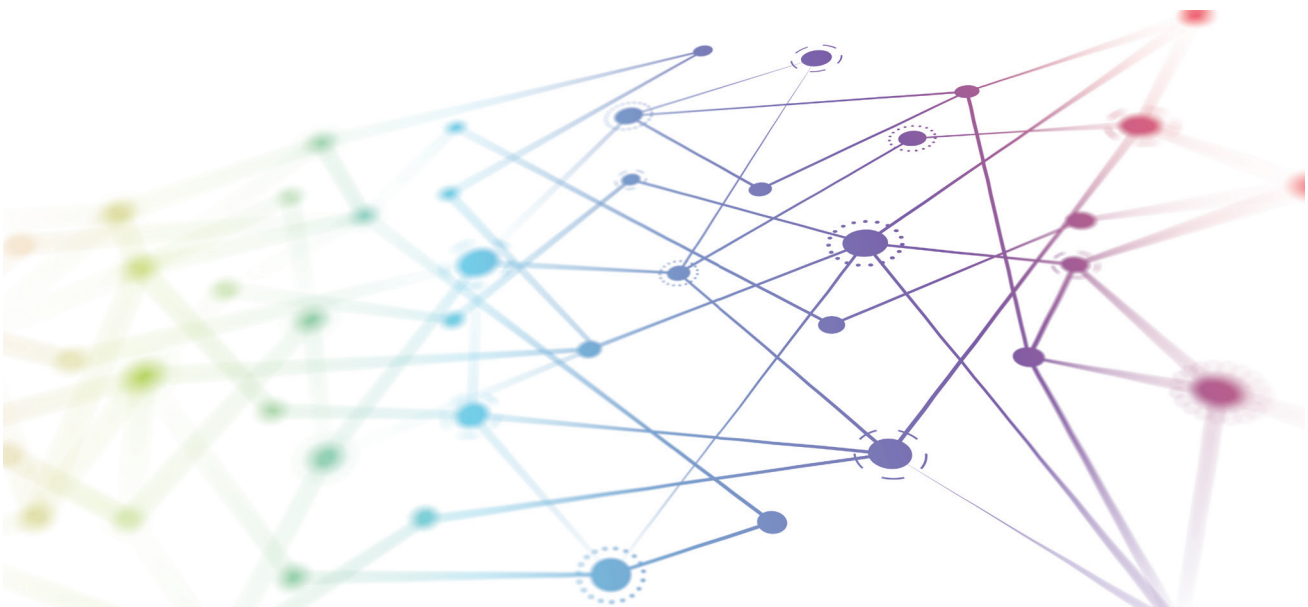
The Evolution of Business Intelligence Technologies

Learning exactly how to leverage all of this data that we have so fervently collected over the years has become industries' biggest challenge. The shift into this new era of Business Intelligence alongside advanced analytics has given us insight to learn not only what, when, who and how many, but also why, will it happen again, what will happen if, and what else can we learn?

A recent article states that machine learning will drive analytics and "big data spending will exceed $114 Billion in 2018 ."

NLP Logix has developed a proprietary machine learning tool kit, over the past six years, which is being used across many industries to deliver the promise of artificial intelligence. This effort has been recognized over the years by numerous national and international organizations through awards and recognition for the team and tooling at NLP Logix.

NLP Logix's evolving technology can increase your revenues by creating the potential benefits of business intelligence programs including:

- accelerating and improving decision making
- optimizing internal business processes
- increasing operational efficiency
- driving new revenues
- gaining competitive advantages over business rivals and credit bureaus

These systems can also help companies identify market trends and spot business problems that need to be addressed.

NLP Logix has developed a variety of tools, applications and methodologies that enable organizations to collect data from internal and external sources. The data is prepared for analysis and reporting, including dashboards and data visualization charts, and made available to corporate decision makers, as well as operational workers.

"Big Data spending will exceed
$114 Billion
in 2018."

Overcoming the Challenges of Change

Keeping pace with change doesn't always come easy. Working with a partner, like NLP Logix, is critical to harnessing big data's potential and creating a strategic roadmap to reach your goals.

Significant organizational and process changes are necessary and are largely dependent on two factors:

1. how your organization currently manages data analytics, and
2. what goals have been established to take advantage of big data analytics.

Understanding your goals is paramount to developing a successful debt recovery strategy, no matter which approach you choose.

Avrid Singh, a serial entrepreneur, believes the challenge usually requires a clear vision of the big picture and the strategic goals. Discussing what this looks like for each business will be different, as each business is different.

An alignment between the two helps develop a strategy that will allow for the most opportunity to succeed.

In addition, Avrid states that finding alignment of the following business purposes will ultimately help attain company goals.

SEARCH

What quality of data do you have? Is it conflicting or misleading? Does it contain missing values or erroneous values?

Determining what you have searched and used in the past can determine a substantial amount about how much potential there is for results.

TRACKING AND PREDICTING

Understanding about the what and when and taking it to levels of how and why using new technology and understanding the patterns developed over time and predicting trends?

REPORTING

Sorting through these very large data sets to make business decisions and improving the bottom line?

Chances are, most businesses are doing all these things, but not with proficiency and insight that a partner like NLP Logix can provide.

Looking at Success: A Case Study

Leveraging your data and optimizing your business can allow you to develop a successful recoverys strategy.

Increasing Debt Recoveries using Behavior Modeling

Debt recovery companies may increase their recoverys on a "per account" basis if they take a behavior modeling approach to work treatment vs. traditional credit bureau-centric strategies. The basis of the behavior modeling approach is predicated on the following three pillars:

- The behavior of the consumer, and how they respond to paying their debt is encoded in the transactional data maintained by debt recovery companies.

- As debt ages, outreach efforts succeed/fail, or new information becomes available, the probability of payment changes.

- Daily or weekly scoring of debt can help outreach efforts reach their full potential.

To accomplish the above approach, it takes an experienced team of machine learning experts and cutting-edge software, to develop models that score the probability a consumer will pay a bill.

This is done by taking very large amounts of historical consumer data, such as healthcare bills or student loans, and applying advanced machine learning techniques to find the behavior patterns within the data.

Additionally certain third-party data sources, like the US Census, can augment existing data, providing even more information for modeling. Once the model is developed, debt recovery agencies can use the results to drive their recovery strategies including: treatment segmentation, client-specific optimizations, and advanced analytics.

Here's how one of the nation's leading healthcare debt recovery companies, partnered with Jacksonville, Florida-based, NLP Logix to put in place a behavior modeling approach.

Looking at Success: A Case Study

THE CHALLENGE

One of the largest receivables management companies in the U.S. was employing the same credit bureau-centric approach to their debt recovery that the vast majority of agencies use across the country. They understood that the debt recovery industry is ever-changing and technological advancements could better serve their clients.

Since the company's founding, the focus has been to provide financial recovery in the most honest and ethical way. One of the leaders within the company read an article in the debt recovery trade publication inside ARM, which highlighted the success of a behavior modeling approach. Building on existing experience with data-driven models, they believed machine-learning models could further advance their performance. To explore this new modeling approach, the company reached out to NLP Logix.

OUR SOLUTION

The fortune 500 company and NLP Logix worked together to breakdown the current workflow treatment plans, and existing models. Building on existing knowledge, together they examined historical transactional data, going back over three years, and began an iterative modeling process.

About four months later, the best performing models were deployed into the company's work flow. This deployment focused on minimizing the operational impact so the models were deployed using a phased-in approach account-by-account. In addition, the two companies worked together and began examining model performance, looking for further advancement opportunities.

One specific area of improvement came through optimizing for the expected value of an account rather than the probability of the account to pay. For example, a lower debt amount is inherently going to have a higher probability to pay which can greatly skew the accounts for treatment.

However, NLP Logix, developed techniques that allow customers to optimize for total expected value, liquidity, or other means.

Looking at Success: A Case Study

THE RESULTS

The two companies have worked together to achieve over 5% increase on a per-account basis from the third and fourth quarter of 2016 over the same two quarters in 2015.

In addition, the company has reduced their credit bureau spend which has more than paid for the development and maintenance costs paid to NLP Logix.

These results were achieved by implementing behavior-based modeling, scoring debt more frequently, minimizing reliance on credit bureaus, and optimizing for client's needs.
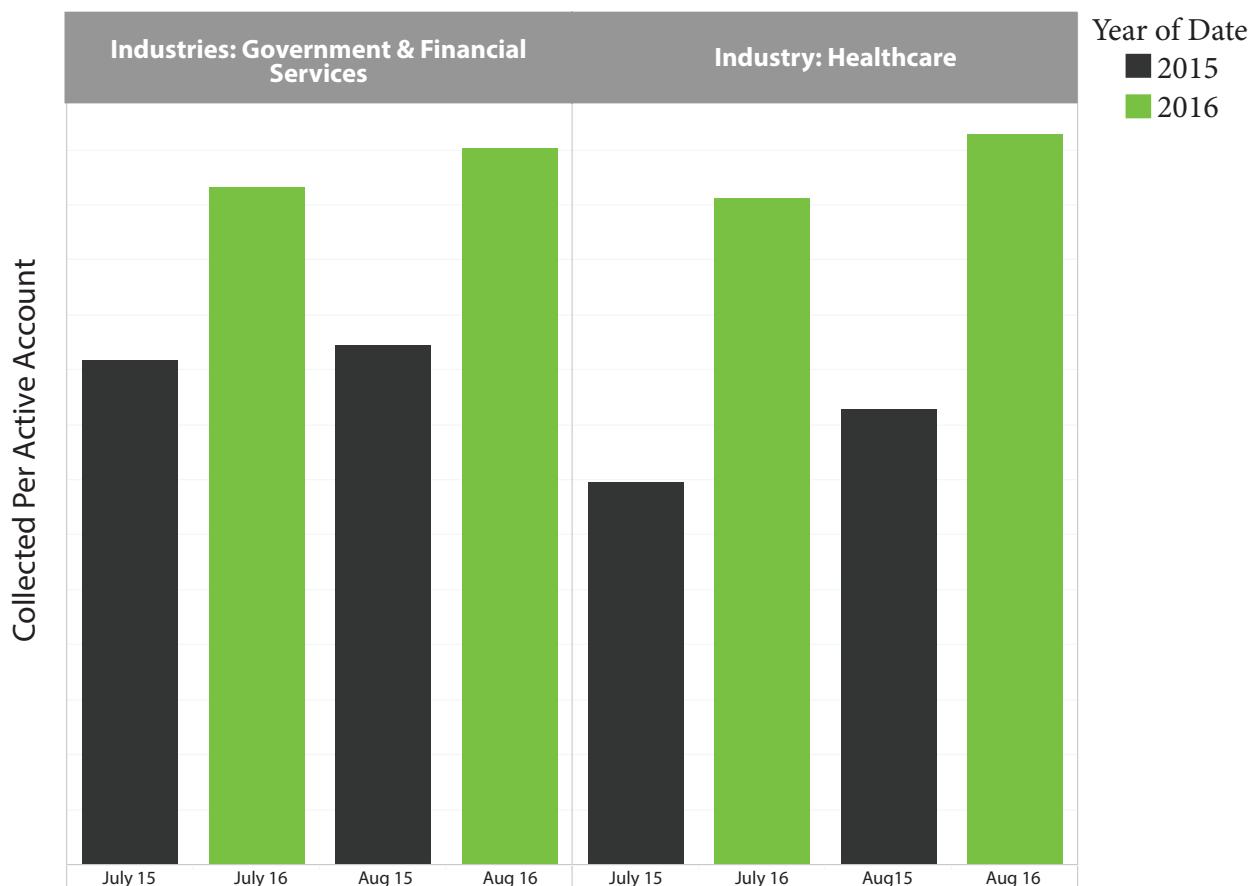
Collected Per Active Account for each month broken down by Business Unit Name. Color shows details about Date Year.

Take Advantage of the Opportunity

The late Steve Jobs stated, "Great things in business are never done by one person. They're done by a team of people."

Let NLP Logix be that team of people who help you succeed. Our team has been built and educated to work with you and seamlessly provide your business with results.

Together they can outperform and truly gain that edge over your competition. Look at how LogixStudio gives you an advantage over the current scores you're working with today.

Benefits of the Solution

- Accounts are scored on a nightly basis to reflect most up-to-date model information".
- Tracking Key Performance Indicators
- Advanced view of recoverys through multiple metrics and advanced reporting
- Liquidity, incoming account volume, incoming balance size etc.
- Tracking Agent Performance

- Early detection of problems can ensure higher recoveries, greater compliance, and brand protection
- Optimize resource allocation
- EVERY account receives a score
- Graduated transitions to upgrades
- Incorporate both value and willingness to pay
- Account scores returned within 30 minutes

Conclusion

The potential for redefining the debt recovery industry using the next generation of technology is tremendous. The innovative technology allows a company to leverage big data enabling accurate decision-making for superior performance.

There are many applications of Machine Learning and Predictive Modeling techniques in the debt recovery industry, but successful implementation requires commitment from top management and a successful teamwork approach to enable changes in processes.

The need to achieve higher levels of optimization and increased revenues may force the debt recovery industry to change their ways of thinking and begin to look at how data can prove to be the best tactical move for success.

Read More about how NLP Logix can increase your results, visit:

nlplogix.com/debtscoring

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