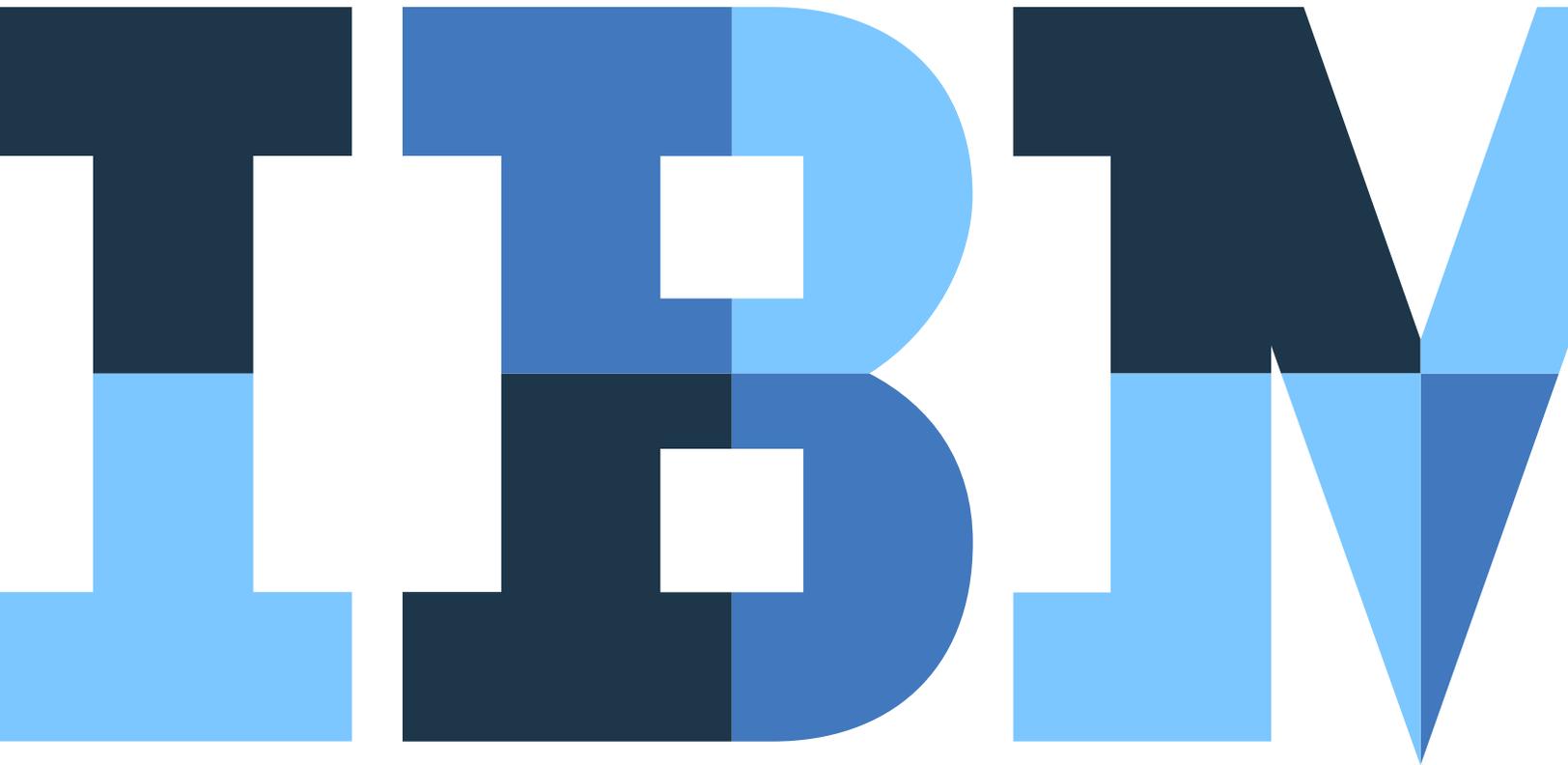# Maintain and grow relationships with predictive analytics

Maintain and grow relationships with your customers by transforming your current data into insights that improve business decisions.

IBM

Contents

Maintain and grow relationships with your customers by transforming your current data into insights that improve business decisions. When you can make reliable predictions about your business' future, you can stock the right products at the right time, hire and retain the best talent, and determine more accurate equipment maintenance schedules, just to name a few. With IBM SPSS software, analyzing current conditions to determine what will happen next becomes part of your daily operations.

Introduction

Organizations of all types are always looking for innovative ways to build new relationships while juggling the ever-important issue of retention as a top priority. Predictive analytics can help you obtain deeper insights about your business, as well as your customers, constituents, students or partners, and apply this knowledge to improve the business processes that drive these relationships.

You are probably aware of many opportunities within your organization to increase efficiency and reduce costs while also better serving your customers or constituents. But achieving a high level of operational excellence can seem like an overwhelming challenge considering the broad scope of people, processes and assets within your enterprise. Data-driven insights can help maximize productivity and profitability in every functional department, from sales and marketing, to human resources, to manufacturing.

Improve customer retention and loyalty

It can cost up to seven times more to acquire new customers than to keep your existing ones, so you need to make every effort to reduce or eliminate customer attrition. If your data exposes customers at risk of ending the relationship, you can take action quickly, offering incentives for the customer to stay.

In these scenarios, you'll typically have lots of information about each customer – what they've purchased, or any contracts or subscriptions they may have with your organization. You'll use this knowledge to **create a profile** of customers who have left, and **build a model** to help identify others at risk of leaving. Then, when a customer contacts your call center, the model can be deployed in real time to determine if that customer is an attrition risk. This enables the call center rep to make a retention offer, such as a discount or free service, which can ultimately prevent the customer from defecting to a competing company.

Predictive modeling can be used when you already have examples of customers who have churned. In this scenario, you would gather all of the data about a customer from all sources, compare it to profiles of past customers who have churned, and then score the customer to determine whether you should pass them on to your retention team or extend a particular offer.

SPSS Modeler can detect even minor anomalies and patterns to determine which of your customers are at the greatest risk of churn, and which of those customers you want to retain. This early identification of potential concerns helps you reach out to customers at the first sign something may be wrong, and also enables you to focus your marketing resources on only the most profitable ones.

XO Communications, a telecommunications provider, used this approach to detect the early warning signs of customer churn. These insights are enabling the company to take proactive steps to head off defections, achieving a 47 percent reduction in churn and US$15 million in "saved" revenue.

Anticipate demand

Data analysis can reveal areas where you can improve inventory and demand planning. For example, if weather trends point to an extremely snowy winter in a particular region of the country, a savvy analyst for a home improvement store chain can use that knowledge to ensure that stores in the appropriate regions have an adequate inventory of snow-blowers, snow shovels and other products that will be in high demand.

Regression analysis is a tool that help managers understand and quantify the relationship between two or more variables to predict future product demand, so you can plan and execute product assortment at the local level by analyzing specific product attributes-size, color or style-and accurately predict which will be most in demand.

By applying **text analytics** to unstructured data for mentions of terms and phrases such as "flu," "sick," and "doctor," and combining that information with **geospatial analytics**, a healthcare organization may be able to identify disease outbreaks quicker than with traditional methods. The organization could then take swift operational action as a result of these insights, including increasing staffing at clinics and hospitals and ensuring pharmaceutical inventories are adequate.

Forecasting is a critical tool that can be used to predict uptrends in demand for certain products and ensure that your manufacturers or suppliers are ready and able to meet demand for the most-sought-after products and services, so you can stay ahead of the competition. By analyzing all types of data from merchandise management, transactional and warehouse management systems, you'll be able to better optimize inventory levels and avoid stock outages or surpluses.

Through data analysis, a retail chain might also learn where new locations are likely to be successful; in this way, they maintain and grow relationships with new customers and the community by anticipating their needs when it comes to store expansion.

Geospatial analysis, which takes into account the temporal and locational aspects of data, can help identify the most highly trafficked or profitable locations for new branches or locations, or enable you to determine in which geographic region people are more likely to buy a particular product or service.

Optimize human resources

From attracting top talent, to accurately forecasting future staffing needs or improving employee satisfaction, organizations need to align HR metrics with business goals. HR analytics enable you to use your wealth of employee data to make better decisions about your most valuable assets. SPSS Modeler delivers better outcomes in two critical areas: retaining your top performing employees, and hiring the right new talent for the right roles.

Retain employees

The cost of employee turnover is staggering, and can cost as much as 50 to 60 percent of an employee's salary. Clearly, diagnosing the root causes of employee turnover can lead to substantial savings. Predictive analytics can accurately determine who is leaving, why they are leaving, and the extent to which turnover is affecting your organization.

Regression is a useful modeling technique that can be used to compare how the resignation rate varies across locations, functions, tenure, age groups, diversity groups, and other variables so you can quickly change working conditions or behavior to retain top talent and use that knowledge to target and fine-tune your retention strategies. Regression models are not only useful for diagnosing employee turnover in the present, but can also help predict who is likely to leave in the future. By placing an employee's demographics into the equation, you can determine how likely an employee is to leave.

By recognizing warning signs and intervening early, your business can offer additional support, development and personalized employment experiences. SPSS Modeler supports targeted retention activities using **clustering techniques** to identify common features of employees or groups of employees with higher or lower retention rates. With this insight, you may be able to identify specific employees at risk of leaving early, and take appropriate steps to retain them, leading to improved results at lower costs.
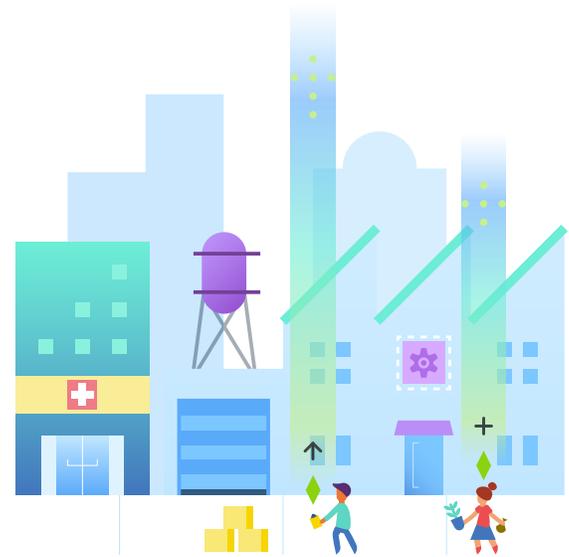
Hire the best-fit candidates

Sorting through masses of resumes in online job portals or your internal applicant systems for the applicants with the right qualifications can be a tedious process. Predictive analytics speeds the process and accuracy of looking for candidates who are likely to perform better and stay longer, and who will be a good overall fit for your organization's culture.

SPSS Modeler has the capabilities to help you find the right candidates or the right roles. **Text analytics**, for example, speeds the process of mining large volumes of resumes for mentions of key skills and experience. SPSS Modeler can also integrate data collected from social media networks such as Twitter, Facebook and LinkedIn to help you look for critical insights into how candidates perceive your organization and the types of individuals your competitors are hiring, enabling you create an ideal candidate profile and more accurate target job postings and advertising to individuals who match that profile.

IBM SPSS Modeler: Your toolkit for growing stronger relationships

IBM SPSS Modeler delivers a range of data analysis techniques and predictive models that enable organizations to increase revenue across the board by creating advanced demand forecasts, optimizing pricing strategies, discovering new products and markets, recruiting and retaining employees and students, and more.

You have a wealth of information stored across multiple enterprise systems: CRM systems, transactional databases, human resources databases, maintenance and enterprise resource planning systems, and more. SPSS Modeler enables you to pull all of this data together to create a complete profile for analysis. The software takes advantage of all the data you have available regardless of format—spreadsheets, databases, text, web, transactional, geospatial—and extracts value from it by discovering untapped insights about your business operations.

Typically, much of this data will not be ready for analysis, and will need to be prepared and cleaned before you can work with it. SPSS Modeler provides automatic data preparation to speed the process, enabling you to spend more time on analysis and communicating results to your key decision-makers and stakeholders.

Some of the techniques that can be used to maintain and grow relationships with customers, employees, suppliers and partners include:

- **Classification algorithms:** This is a data mining function that assigns your employees, customers, students or partners to target categories or classes. The goal of classification is to accurately predict the target class for each case in the data. For example, a classification model could be used to identify students with a low, medium or high probability of graduating.
- **Segmentation algorithms:** These techniques group people or detect unusual patterns in your customers or prospects. Marketers frequently use segmentation algorithms to divide a broad target market into subsets of people that have or appear to have common needs, interests, and priorities, and then design and implement strategies to target them.
- **Association algorithms:** These techniques look for relationships between fields—for example, a certain percentage of candidates who have both skill "A" and "B" also have skill "C." Using this insight, you can make more effective hiring recommendations.
- **Time-series modeler:** This technique creates models for time series and produces forecasts. It includes an Expert Modeler that automatically determines the best model for each of your time series.

SPSS Modeler includes the most popular types of classification, segmentation and association models, in addition to many other analytics techniques, such as forecasting and text analytics, for solving just about any business challenge.
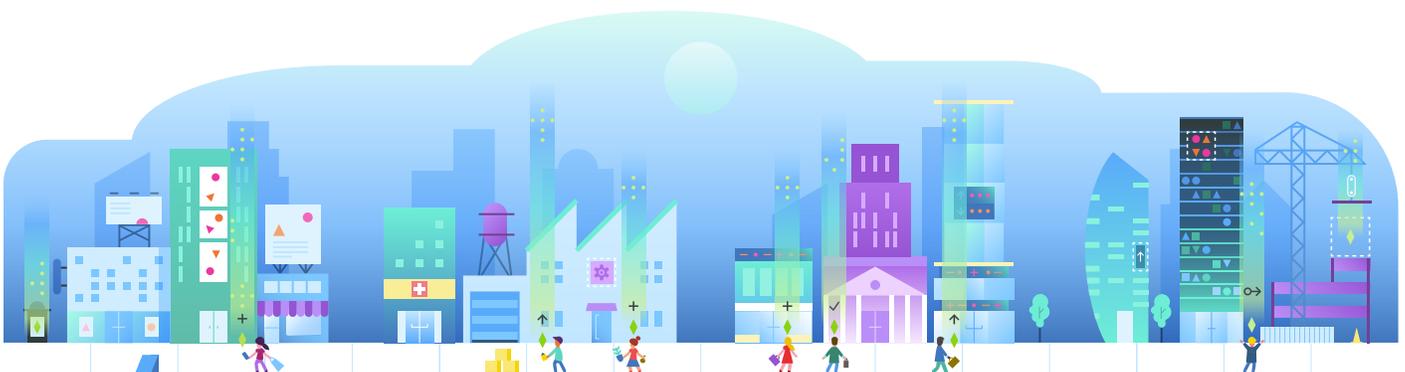
SPSS Modeler software can import and analyze data from a broad range of systems, small and large, by using APIs to integrate with other data systems. With a graphical approach that requires no programming, IBM SPSS Modeler is designed to be used by a wide variety of professionals, whether or not they are trained programmers or analysts. You don't even need to know which technique to choose; the SPSS software will suggest options that are applicable to your project and help you select the best approach.

Try IBM SPSS Modeler for better results today

Now that you have a clearer idea of the many ways you can use predictive analysis to maintain and grow critical business relationships, you're ready to try SPSS Modeler.

Download our 30-day trial to discover how you can transform your data into decisions that lead to increased profitability and competitive advantage.