

SPSS, an IBM company is a leading provider of predictive analytics software and solutions. For more than 40 years, our products have enabled customers worldwide to clearly identify patterns and trends in events, behaviors and attitudes. Using IBM SPSS statistics, data mining, text mining and data collection software and solutions, government agencies can anticipate events, optimize funding targets and staff and resources. Discover and prevent improper payments more efficiently.

Solutions

Finding new staff with the right skill sets is a major challenge for any agency – particularly as a large portion of federal, state and local employees reach retirement age. These retiring “baby boomers” are leaving behind a labor shortage and creating a higher demand for programs, such as Social Security, Medicare and other social services.

IBM SPSS predictive analytics solutions help agencies discover patterns and make connections – even in large, complex datasets – and to draw reliable conclusions about current conditions and future events. Human resource managers can then effectively forecast requirements and fill open positions accordingly.

We have years of experience in the design and creation of targeted predictive analytics solutions for government human resource interests, including:

Recruiting new talent

Predictive analytics makes it possible to determine the best predictors of employee success within a specific work environment, and then analyze competencies and qualifications based on these predictors.

Predictive analytics can help prioritize applicants, indicating those who are most likely to accept an offer. It can also determine which type of employment offer will be the most successful based on a number of factors, including the prospective employee’s expressed values and attitudes. The process can help human

resource managers target benefits packages, recruitment bonuses, travel-to-first-duty compensation and/or above-minimum starting salary.

In its recruiting, one branch of the U.S. military uses IBM® SPSS® Modeler* to build models of prospects who have replied to its advertising campaigns and determine who is most likely to enlist. Previously, without a system to prioritize recruitment leads, only four leads contracted out of every 100 replies received. Using IBM SPSS Modeler, the recruiters were able to target 20 leads to get two to three to contract, significantly increasing their conversion rate.

Managing employee turnover

Government agencies must provide appropriate manpower and skill sets for their programs to succeed. In order to do this, human resource managers can create models that predict attrition based on employee survey and interview analyses. Managers can use predictive models that reflect trends in employee characteristics, behaviors and attitudes to take proactive actions to retain or recruit specialized personnel.

To do this, another office within the U.S. military predicts attrition using demographic data for personnel. The office created a predictive model in IBM SPSS Modeler to analyze why personnel leave and used this model on a weekly basis. In addition, the Office uses IBM SPSS Modeler to determine the most economical incentive to convince an employee not to leave.

Career planning and succession planning

Employing predictive analytics allows human resource managers to develop strategic retention strategies that include meaningful work assignments, maximizing unique skills and knowledge, and opportunities for increased responsibility. Managers can also advise and prepare employees for the career path for which they are best suited. This is because the process allows leaders to look at employee characteristics in combination with demonstrated skills, aptitudes and expressed goals.

A U.S. military command center is employing predictive analytics for career planning as it prepares recruits for the

Armed Forces. The center uses IBM SPSS Modeler in order to determine sets of predictor variables that are likely to be the best indicators of success. Using information gathered from physical tests, standardized aptitude tests and medical tests also helps the center to better place applicants in the type of career path best suited for their skills and interests.

Predictive analytics capabilities

Predictive analytics enables agencies to exploit large, complex databases to identify trends in service and skills requirements, discover patterns of behavior and draw reliable conclusions about current conditions and future events. IBM SPSS predictive analytics solutions for human capital management are based on the following technologies:

Data collection/survey research

IBM® SPSS® Data Collection* allows agencies to quickly develop surveys (e.g., exit interviews, employee satisfaction surveys, training assessments) and analyze results in a secure environment. Surveys can be conducted online, by paper, in person or using multiple methods, giving employees better opportunities to provide feedback. Data, surveys and access to the survey platform are centralized and secure. This centralized approach allows human resource managers to enforce standards for data collection, establish benchmarks and track changes using a single system for multiple feedback programs.

Data mining and text mining

IBM SPSS Modeler enables human resource managers to combine collected data with existing employee information from sources across the agency, including flat files, databases and all formats of text and open source Web data (such as blogs, e-mails and open-ended response questions on surveys). This unique capability enables human resource managers to identify patterns, trends and anomalies in order to forecast the need for skill sets, identify ideal applicants, retain employees who are likely to leave and optimize career and succession planning.

Customers Public sector

IBM SPSS solutions for government have helped hundreds of federal, state and local agencies.

Additionally, state and local agencies in tax, health, transportation, public safety and education nationwide are IBM SPSS customers.

Private sector

Twenty-four of the top 25 market research companies, 22 out of 24 of the top global banks, as well as multiple major medical research institutions, insurance companies, retail chains and telecommunications providers worldwide use IBM SPSS software and solutions.

**IBM SPSS Modeler and IBM SPSS Data Collection were previously called PASW® Modeler and PASW® Data Collection.*



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