Data mining personnel

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With the dark clouds of global recession now is the time for companies to make the most of their most valuable assets - their personnel. Writing in a forthcoming issue of the *International Journal of Business Information Systems*, researchers in India explain how data mining could help unearth the diamonds in the rough.

Jayanthi Ranjan of the Institute of Management Technology in Ghaziabad Uttar Pradesh, and D.P. Goyal of the Institute of Management Education in Ghaziabad, India, point out that while data mining, or knowledge discovery, is commonplace in many areas of business, few have applied it to human resources.

Enterprises commonly identify their most important resource as their people. Employee skills, adaptability, knowledge and dedication are often crucial to a firm differentiating itself from its competitors. Despite the obvious advantages, many companies pay only lip service to using their personnel as effectively as possible and to exploiting the information available to them.

Data mining is the process of extracting information from large data sets through the use of algorithms and techniques drawn from the field of statistics, machine learning and database management systems, the researchers explain. And could just as readily be used to glean useful insights within a human resources database as in any other sphere. In contrast, traditional methods of looking for patterns in a large body of data usually involves manual work in interpretation of data, and thus are slow, expensive and highly subjective.

A human resources database will most likely contain information, such as skills, qualifications, and employment history for all staff, as well as their position within the company and interactions between personnel as well as promotions and demotions. "We have developed a method of data mining that can discover and extract useful patterns from such a large data set to reveal patterns that might be useful to improving a business in terms of efficiency and profits," the researchers explain.

By understanding these patterns business can predict what kinds of human resource activities are likely to occur, including natural staff turnover, changes in morale during times of change, how promotions, pay rises and other management decisions are likely to affect staff not directly involved, and even which people will work most effectively together on what particular tasks. Data mining could then be used to help firms decide employee performance (both group-based and individual performance) and hence improve their policies, set up new strategies to help them compete in the market place edge and perhaps even sweep away those dark clouds during times of recession.

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