Business Analytics within Management Information Systems

BY CHRISTINE ARRINGTON

A good example of cutting-edge analytics at the Huntsman School comes from the MIS department, where students Sterling Morris and Josh Light worked together with a team to create the entrepreneurial prizewinning Politicit.com website mentioned on page 7 in this magazine; it tracks keywords about politicians across the web through social media and key “influencers” to predict how public opinion is trending, even before polls have detected a change. Each candidate’s “IT” score is based on a neural network model that measures the buzz around that candidate.

The professor and student discussed the kinds of new skills and techniques needed to take full advantage of the information now available online. “Barack Obama has 25 million Facebook friends, each of whom has, on average, 390 friends,” Professor John D. Johnson, team advisor, offered. “If he reaches out to his Facebook friends and they contact their friends, minus any duplication, he can get his message out to a vast number of people.”

“Currently we’re utilizing what we term ‘stat 2.0,’ or second generation statistics,” Josh said. “Traditional statistics was conceived in an era with limited data and computational power. That is no longer the problem. At Politicit.com, we download up to 20 megabytes of data every day from the internet, traditional media, and social media, including every Twitter hash-tag having to do with a presidential candidate. Then we mine the data, analyzing which tweets go viral, figuring out who the most important ‘influencers’ are and what they’re saying.”

The next stage is using tools smartly to get messages to “go viral” — be repeated and forwarded by huge numbers of people. “We can identify, say, five key words that have been influential,” Josh said. “Then we can calculate how many times a message will be retweeted. Eventually it will be like a genetic algorithm that can be programmed to repair itself.”

One project the team is developing is an “advocate network” through which voter lists can be “socialized” in order to get messages to have a viral effect; the network could include giving members points for retweeting, for example, and could allow them to earn prizes over time. “The question is, can I use data mining to understand the interactions of individuals and how they influence others well enough to construct influence networks?” Josh said. He’s working on that now.