ABSTRACT
Why just count crime when you can anticipate, prevent and respond more effectively? Companies in the commercial sector have long understood the importance of being able to anticipate or predict future behavior and demand in order to respond efficiently and effectively. Embracing the promise of predictive analytics, the public safety community is moving from a focus on "what happened," to a system that enables the ability to anticipate future events and effectively deploy resources in front of crime; thereby, changing outcomes. While we have become familiar with the use of advanced analytics in support of fraud detection and prevention, techniques similar to those used to support customer loyalty programs and supply chain management have been used to prevent and solve violent crimes, enhance investigative pace and efficacy, support information-based risk and threat assessment, and deploy public safety resources more efficiently. As public safety agencies increasingly are asked to do more with less, the ability to anticipate crime represents a game changing paradigm shift; enabling information-based tactics, strategy and policy in support of prevention and response. Reporting, collecting and compiling data are necessary but not sufficient to increasing public safety. Ultimately, the ability to anticipate, prevent and respond more effectively will enable us to do more with less and change public safety outcomes.

Categories and Subject Descriptors
H.2.8 [Database Management]: Data Mining.


Keywords
Data Mining, predictive analytics, counter-terrorism, crime prevention, information-based risk assessment, public safety.

Bio
Dr. Colleen McLaughlin McCue, GeoEye Analytics, brings over 18 years of experience in advanced analytics and the development of actionable solutions to complex information processing problems in the applied public safety and national security environment. Her areas of expertise include the application of data mining and predictive analytics to the analysis of crime and intelligence data, with particular emphasis on deployment strategies, surveillance detection, threat and vulnerability assessment, fraud detection, geospatial predictive analytics, and the behavioral analysis of violent crime. Dr. McCue's experience in the applied law enforcement setting and pioneering work in operationally relevant analytical strategies has been used to support a wide array of national security and public safety clients. Dr. McCue has published her research findings in journals and book chapters, and has authored a book on the use of advanced analytics in the applied public safety environment entitled, Data Mining and Predictive Analysis: Intelligence Gathering and Crime Analysis. Dr. McCue earned her undergraduate degree from the University of Illinois at Chicago and Doctorate in Psychology from Dartmouth College. She completed a five-year postdoctoral fellowship in the Department of Pharmacology & Toxicology at the Medical College of Virginia at the Virginia Commonwealth University.