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Computer Science Seminar Series, 2014
National Capital Region

Online Privacy – What Can We Re-Identify

Speaker: Prof. Lisa Singh
Georgetown University
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1:00PM- 2:00PM, NVC 325

Abstract

The popularity of social networking sites has led to the creation of massive online databases containing potentially sensitive personal information, portions of which are publicly accessible. Even though most sites allow users to customize the degree to which their information is publicly exposed, users may not be aware that their private data can be potentially revealed using straightforward record linkage and re-identification. This work will begin by presenting case studies focused on sensitive data re-identification. We show that while targeted re-identification is fairly straightforward, large-scale re-identification is less likely. I will then present a methodology for inferring sensitive attribute-values from online social media sites using a random site-based population. For our tested population, I will show that certain attributes are more accurately predicted than others when using different inference algorithms. Finally, I will conclude by describing a framework for information exposure detection that can be used to help users quantify their levels of exposure.

Biography

Lisa Singh is an Associate Professor in Computer Science at Georgetown University. She received her Ph.D. from Northwestern University in 1999. Her research interests include mining social networks, privacy preserving data mining, anomaly detection, visual analytics, graph databases, and data reduction of large graphs. Along with research in these areas, she has a number of interdisciplinary research projects focusing on problems in the area of network and data science. Her research is supported by the National Science Foundation and the Office of Naval Research. Dr. Singh serves on organizing and program committees of the major data mining and database conferences, including KDD, ICDM, SIGMOD, PVLDB, and ICDE. She is also heavily involved in initiatives involving women in computer science and computer science in K-12 education. More information about her work can be found at: http://cs.georgetown.edu/~singh.