CISC 432*/CMPE 432*/CISC 832* Advanced Database Systems

Assignment 1 – Big Data Applications

Due October 4, 2016

The explosion of data now available from both private and public data sources means analytics technologies that mine structured and unstructured data to derive insights to improve decision-making are receiving substantial attention. Big data technologies are being used in a wide range of areas including commerce, marketing, health, environment, urban planning and scientific research. In this assignment you are to find an interesting application of big data and provide an overview of the application, the problems involved in the application and the use of big data to solve the problems. Some possible applications of big data include log analytics, fraud detection, social media and sentiment analysis, product recommendation, risk modeling and management, smart electrical grid management, disease diagnosis and drug design.

Your report should be based on one or more references taken from the literature. Remember the report is a "scientific" report and should not just be based on marketing literature taken off the Web. You need to have at least one scholarly article as the basis for your report. Look at the research papers used in class to get an idea of the structure and style of a scientific report. Your report should typically contain the following sections:

- Introduction – motivation for, and definition of, the application; reason why it is a big data application;
- Application – explanation of the purpose of the application;
- Approach – explanation of the big data approach used for the application; highlight the important technical issues or problems;
- Discussion – your opinion of the approach used to provide the application; strengths and weaknesses; novel technical solutions;
- Summary – important lessons or aspects of the application and its implementation
- References

Reports should be 4 to 5 pages (double-spaced) in length. Reports will be graded on both content and presentation.