Abstract:

Data Mining is fast becoming a pervasive technology that is poised to touch all aspects of our lives. This can be mainly attributed to the fact that Data in the world is growing at an unprecedented rate. Today, decision making is more data-centric and complex than ever before. Computational requirements for such complex and data intensive decision support systems are also increasing exponentially.

There is a definite need for having a highly scalable distributed computing solution which can abstract the increased complexity in computing systems from its users and at the same time provide performance benefits. There are many distributed computing systems that have been developed for general purpose computing like cluster computing, grid computing, and more recently MapReduce/Hadoop. Although, the performance benefits that one can derive from cluster and grid computing is significant, the level of abstraction is much lower than user’s expectations.

Not many efforts have been made to develop a distributed computing solution specific to a particular kind of application. In my talk, I will focus on the work we are doing at BITS, Pilani towards building a scalable distributed computing system for Data Mining on top of a cluster infrastructure. The objective of such a system is to provide users with adequate levels of abstraction and performance at the same time.

Brief Biography:

M. Phil. & Ph.D. in Mathematics in 1995 from IIT, Roorkee, India and working with BITS, Pilani since then. Teach courses on Databases, Data Warehousing, Data Mining, Machine Learning, Logic, and Discrete Structures. Research interests include Incremental Data Mining algorithms, Data Mining applications, Cluster Computing, Spatio-temporal Data Modeling and Analytics, and Indexing strategies for scientific data. Recipient of the IBM’s 2010 Scalable Data Analytics Research Innovation Faculty Award for a research proposal on “Developing smart crop management system using data analytics”. Currently working on the prototype.