Big Data Analytics as a Service: Exploring Reuse Opportunities

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As data scientists, we live in interesting times. Data has been the No. 1 fast growing phenomenon on the Internet for the last decade. Big data analytics have the potential to reveal deep insights hidden by big data that exceeds the processing capacity of existing systems, such as peer influence among customers, revealed by analyzing shoppers' transactions, social and geographical data. In the past 40 years, data was primarily used to record and report business activities and scientific events, and in the next 40 years data will be used also to derive new insights, to influence business decisions and to accelerate scientific discovery. The key challenge is to provide the right platforms and tools to make reasoning of big data easy and simple. In this keynote talk, I will explore reuse opportunities and challenges from multiple dimensions towards delivering big data analytics as a service. I will illustrate by example the importance and challenges of utilizing programmable algorithm abstractions for many seemingly domain-dependent data analytics tasks. Another reuse opportunity is to exploit unconventional data structures and big data processing constructs to simplify and speed up the big data processing.

Ling Liu is a Professor in the School of Computer Science at Georgia Institute of Technology. She directs the research programs in Distributed Data Intensive Systems Lab (DiSL), examining various aspects of large scale data intensive systems. Prof. Ling Liu is an internationally recognized expert in the areas of Database Systems, Distributed Computing, Internet Systems, and Service oriented computing. She has published over 300 international journal and conference articles and is a -recipient of the best paper award from a number of top venues, including ICDCS 2003, WWW 2004,

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