CMPT 756 - G100 Systems For Big Data

Instructors: Ryan Shea

SFU Burnaby

Calendar Objective/Description:

From healthcare to social media the world generates a tremendous amount of data every day, often too much to be processed on a single computer or even sometimes a single data centre. In this graduate seminar we will learn about technologies and systems behind Big Data. In particular, we will discuss what challenges exist in processing and storing massive amounts of data. We will explore how these challenges are being solved in real-world systems as well as the limitations inherent in these designs. The evolution of these technologies will be explored by reading both current and historically significant research papers.

Instructor's Objectives:

From healthcare to social media the world generates a tremendous amount of data every day, often too much to be processed on a single computer or even sometimes a single data centre. In this graduate seminar we will learn about technologies and systems behind Big Data. In particular, we will discuss what challenges exist in processing and storing massive amounts of data. We will explore how these challenges are being solved in real-world systems as well as the limitations inherent in these designs. Students will get hands on experience deploying and securing these systems. Further, the evolution of these technologies will be explored by reading both current and historically significant research papers.

Prerequisites:

Operating Systems (CMPT 300) and Database Systems (CMPT 354), or equivalents. Students with credit for CMPT 886 when offered as a Special Topics course in Big Data may not take this course for further credit.

Grading:

To be discussed the first week of classes.

Academic Honesty Statement:

Academic honesty plays a key role in our efforts to maintain a high standard of academic excellence and integrity. Students are advised that all acts of intellectual dishonesty will be handled in accordance with the SFU Academic Honesty and Student Conduct Policies (http://www.sfu.ca/policies/gazette/student.html).