

“BIG” DATA IN DATABASE COURSE

*Anil Aggarwal, University of Baltimore, 1420 North Charles Street, Baltimore, MD
21201, 410-837-5275, aaggarwal@ubalt.edu*

ABSTRACT

Data is going through evolution and maybe a revolution. Data is generated at the speed of light and businesses must make decision at the same speed. Much of the new data is unstructured requiring different approaches. Many have calling this “big” data. Typically described as 4 V’s this data is making everything challenging but exciting. This also creates challenges for instructor who need to either offer a course in big data or at a minimum include it in an existing course. It is important that our students understand this new phenomenon in addition to existing systems. As such, this paper proposes an outline of including big data in an existing database course.

INTRODUCTION

As social media diffusion intensifies it is becoming necessary for business students to have knowledge of both old (structured) and new (unstructured) data. Typically, old data is generated by transactions and new data is generated by video, social media sites (Facebook, Twitter, Snapchat, Instagram, etc.) and smart gadgets (tablets, sensors, phones, etc.). Data generated by social media and smart gadgets do not have a typical structure that can be modeled in a relational database. There are differences on how each data type is stored and processed.

Infusion of BIG Data

This experiment involves a mid western university. University offers concentration in information system. Currently, the database course has the following learning objectives:

“Examines the theories and concepts employed in database management systems (DBMS) and the efficiencies and economics of such systems. The course specifically addresses steps in the database cycle, including normalization, database design, and implementation and developing queries using SQL. The functions of various types of DBMS are described, including their purpose, advantages, disadvantages and applications in business. Data administration, data requirements for ERP systems and data security issues are also covered”.

The new proposed description and the new database course is still evolving. We will provide mapping of needed skills and proposed new database course and discuss our experiences with developing and conducting the course.