

CST4724 Data on the Web Syllabus

Course Description

In this course, students develop a fundamental and practical understanding of the Web based database domain particularly NoSQL databases. Traditional relational database models are reviewed and NoSQL database models such as key-value, document, columnar and graph are analyzed, employed and practiced. Query and retrieval techniques used for Web data in connection with NoSQL database models are discussed, compared and utilized. NoSQL databases are examined and utilized. In addition, the impact of the acquisition and use of big data and NoSQL databases is discussed in terms of ethical and moral implications.

Course Objectives

Upon successful completion of this course, the students acquire the following knowledge and skills:

1. An understanding of the issues concerning the design, implementation and querying of relational and non-relational databases.
2. Understand the issues concerning the ethical and moral implication of the acquisition and representation of big data and NoSQL databases.
3. Practical experience in the use of NoSQL databases to design, create, update and insert data.
4. Practical experience in the use of open source data tools to query data in NoSQL databases including key-value, graph and document

Prerequisites

Student must have successfully completed CST1204 or CST3504 with a grade of C or higher.

Contact Information

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Academic Integrity Policy

Students and all others who work with information, ideas, texts, images, music, inventions, and other intellectual property owe their audience and sources accuracy and honesty in using, crediting, and citing sources. As a community of intellectual and professional workers, the College recognizes its responsibility for providing instruction in information literacy and

academic integrity, offering models of good practice and responding vigilantly and appropriately to infractions of academic integrity. Accordingly, academic dishonesty is prohibited in the City University of New York and at New York City College of Technology and is punishable by penalties, including failing grades, suspensions, and expulsion. The complete text of the College policy on Academic Integrity may be found in the catalog.

Grading Breakdown

20% for Midterm Exam

40% for Final Project*

30% for Assignments 1, 2 and 3*

10% Participation

PLEASE NOTE

*15 points will be deducted from the grade of any homework assignment or Final Project submitted past the posted due date.

Letter Grade	A	A-	B+	B	B-	C+	C	D
Numerical Grade	93-100	90-92.9	87-89.9	83-86.9	80-82.9	77-79.9	70-76.9	60-69.9

Weekly Topics & Readings

Homework Assignments