DSO 553 – *NoSQL Databases in Big Data*
Section(s) - 16253R

Professor
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When
MW 12:30-1:50 (2nd half of semester)

Office
BRI 400B

Units
1.5

WHY TAKE THIS COURSE?

Data is a crucial asset in today's business world, and it's constantly evolving. This course prepares you for a job market where data skills are essential. You'll gain hands-on experience with NoSQL databases, enabling you to work with all types of data -structured, semi-structured, and unstructured - skill especially important for handling Big Data, which often doesn't fit into traditional relational databases. Prepare yourself to thrive in a data world that keeps evolving.

COURSE OBJECTIVES

The objective of this course is to provide the prospective data professional with fundamental knowledge on why non-relational databases started existing and why they are so useful in the constantly evolving data world, as well as with the skills to handle more modern types of data that does not have the traditional relational form that we learn in SQL.

KEY CONCEPTS

Non-relational Databases
MongoDB (Document Databases)
Neo4j (Graph Databases)
Non-relational Query Planning and Optimization

COURSE DESCRIPTION

This course provides the student with an understanding of how and why NoSQL databases started existing in the first place and the hard problems they solved, when Big Data emerged. It will introduce the idea of structured, semi-structured and unstructured data. Adding to the knowledge that we gain in DSO552 and DSO555 on relational databases and techniques, here we will work on similar problems and techniques using non-relational databases and less structured data. This is a deeply practical course dealing with what is happening in the industry today. It will also equip the student to gain hands-on knowledge on two of the most widely used types of NoSQL databases – Document Databases (MongoDB) and Graph Databases (Neo4j).

DSO 552 pre-requisite can be waived. Please see BA Certificate Advisor for additional details