

CST4724 Weekly Topics and Readings

Week 1: Introduction to NoSQL

- Watch Forbes video: [What exactly is big data](#)
- Read: [W3 Resource Introduction to NoSQL](#)

Week 2: NoSQL and big data

- Susan Etlinger: [What do we do with all this Big Data](#)
- Tricia Wang: [The human insights missing from Big Data](#)

Week 3: Foundational Data Architecture Patterns

- Browse [Introduction to DB course](#) provided by Stanford University
- Read Lifewire's [Database Normalization Basics](#)
- Read Penn State University's OER [Relational Database Concepts and Theory](#)
- Look at slides provided by MIT OpenCourseWare [Data Normalization](#)
- Browse the [Database design book](#) provided from BC Open Textbook website

Week 4: Foundational Data Architecture Patterns: Relational Database Management Systems (RDBMS)

- Read Tutorials Point's [SQL Tutorial](#)
- See the eight part short Video from Stanford University [Tutorial of SQL](#)
- See the video from Khan Academy on [SQL Basics Course](#)
- Read Oracle's [SQL User's Guide and Reference](#)

Week 5 & 6: NoSQL Data Architecture Patterns: Key Value Stores

- Browns [Introduction to NoSQL Data Solutions](#) course from EdX
- Read [What is a Key-Value Database](#)
- Read Tutorials Point's [Redis Guide](#)

Week 8 & 9: NoSQL Data Architecture Patterns: Graph Stores

- Read [What is a Graph Database](#)
- Watch the DataStax video [Graph Database 101](#)
- Read Tutorials Point's [Neo4j Guide](#)

Week 10: NoSQL Data Architecture Patterns: Column Family (Bigtable) Stores

- Watch YouTube video [What is HBase Architecture](#)
- Read [What is a Column Store Database](#)
- Read Tutorials Point's [HBase Guide](#)

Week 11 & 12: NoSQL Data Architecture Patterns: Document Stores

- Read [What is a Document Store Database](#)
- Read Tutorials Point's [MongoDB Guide](#)
- Browse the [MongoDB basics](#) course provided from EdX

Week 13 & 14: Final Project