

# Spring 2017 CS185C Section 2

## Introduction to NoSQL databases

**Instructor: Dr. Kim**

Days and Time: TR 10:30 – 11:45

Course Prerequisites: CS157A or equivalent

### Course Description

NoSQL databases emerged to meet a new set of technology requirements imposed by modern enterprise applications. The course covers the features and data models of NoSQL databases, representative NoSQL databases and their use cases, data processing in NoSQL databases using MapReduce and Apache Hive, and programming using API for NoSQL databases. A team project is required which involves configuration and deployment of a NoSQL database of choice, populating the database with publicly available datasets, and API coding.

### Course Topics

- Why NoSQL? Features of NoSQL Databases
- NoSQL Data Models
- NoSQL Distribution Models
- MongoDB
- API coding with MongoDB
- Cassandra
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- NoSQL in the cloud
- Processing NoSQL data: Map-Reduce, Hadoop Hive

Type	Example	
Key-Value Store	 redis	 riak
Wide Column Store	 HBASE	 cassandra
Document Store	 mongoDB	 CouchDB <small>relax</small>
Graph Store	 Neo4j	 InfiniteGraph <small>The Distributed Graph Database</small>