Winter 2011

CS 707-01: Information Retrieval

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CS707 Information Retrieval

- **Instructor:** T. K. Prasad  
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- **Email:** t.k.prasad@wright.edu  
- **Home Page:** [http://knoesis.wright.edu/tkprasad](http://knoesis.wright.edu/tkprasad)

- **Quarter:** Winter, 2011.  
- **Class Hrs:** 4:10pm-5:25pm, TTh, Fawcett 218  
- **Office Hrs:** 3-4pm 395 Joshi Research Center (or by appointment)

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### Course Objective

- To cover the foundations of information retrieval, and the design, analysis and implementation of IR systems.

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### Course Prerequisite

- CS600 Data Structures and Algorithms

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### Course Description

This course will cover models for information retrieval, techniques for indexing and searching, and algorithms for classification and clustering. It will also cover SVM, latent semantic indexing, link analysis and ranking, Map-Reduce architecture and Hadoop, to different degrees of detail, time permitting.

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### Course Load

The course load includes a programming project (30 pts), a midterm exam (30 pts), and a final exam (40 pts).

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### Required Texts


Recommended Texts


Reference URLs

- Lucene Text Search Engine (http://lucene.apache.org/)
- Hadoop (http://hadoop.apache.org/core/)
- Singular Value Decomposition (http://www.uwlax.edu/faculty/will/svd/index.html)
- Strang's Linear Algebra Course (MIT) (http://ocw.mit.edu/OcwWeb/Mathematics/18-06Spring-2005/CourseHome/index.htm)
- Andrew Moore's Statistical Data Mining Tutorials (CMU) (http://www.autonlab.org/tutorials/)
- Matei Zaharia's Introduction to MapReduce and Hadoop (Cloud Computing) (in powerpoint) or (archived video)

Grading

The A/B/C/D/F letter grade will be assigned at the end of the course.

Tentative Class Schedule and Syllabus
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<th>Addl. Reading</th>
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<td>Information Retrieval: The Boolean Model</td>
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<td>Class 2</td>
<td>The Vector Space Model: Term Weighting and Scoring</td>
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<td>Class 15</td>
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<td>Class *</td>
<td>Web Search: Crawling and Indexes</td>
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<td>IIR-21</td>
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<td><strong>Final Exam (5:45pm-7:45pm, March 15)</strong></td>
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http://www.cs.wright.edu/~tkprasad/courses/cs707/cs707.html  
1/24/2011
Assignments (Winter 2011)

- Assignment 1. (Sample Medline-1033 dataset)
- Assignment 1 (Alternate)

Exams (Winter 2010)

- Midterm.
- Final.

T. K. Prasad (Jan 3, 2011)