LONG ISLAND UNIVERSITY

PALMER SCHOOL OF LIBRARY AND INFORMATION SCIENCE

SYLLABUS FOR LIS 901:2537

Text Analytics

NYU CAMPUS

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Course Description: **Text analytics as a function of knowledge management-Information Literacy & Emerging Technologies**

(3 credits)

Course Methods

Since this is an elective course, weekly topics will be structured around the readings from the required articles (listed below) . Students are expected to complete the assigned reading for the week prior to class.

This is a class with classroom lecture and discussion. Students are expected to be active participants in the discussion, bringing their backgrounds and experiences to enrich the discussion of the Text Analytics past, present, and future. Attendance in each class is a requirement of the course. If you cannot attend the class or part of a class, please let me know ahead of time.

This course also will emphasize skills that are necessary for success in the Palmer School, such as:

- Reading professional literature and distilling its main points
- Accessing and evaluating information resources
- Understanding issues and concerns facing the Text analytics
- Writing clearly and succinctly
- Delivering presentations to other professionals
- Using Course Management Software (in our case, Blackboard)

Student Learning Objective	Assessment Method
1A. Students will articulate the ethics, history, values, and foundational principles of Information Literacy as a meta literacy.	Issue Paper
1B. Students will demonstrate an understanding of Information Analytics as a competency	Issue Paper
1C. Students will explain, compare, and contrast different types of tools used for Information Analytics currently available (e.g. Quosa, and emerging text mining and visualization tools BizInt)	tool evaluation and information product report
1D. Students will use effective communication techniques and critical thinking skills, such as problem solving and decision-	Issue Paper

making skills.	
2A. Students will develop a proposal for a review article on text mining tools in an environment of personal interest (case study)	Project Proposal
2B. Students will complete a review article on the impact or potential impact of text analytics in their chosen area of interest that may be considered for publication.	Project Report
3A. Students will review tools used to facilitate Information Analysis in various situations/environments in accordance with legal, ethical, and professional standards.	Project report
4A. Students will demonstrate an understanding of information analytics in the profession	Article Summaries and Review Article
4B. Students will evaluate, conduct, and apply text analytics & visualization in library and information science and related fields.	Project Summary

Course Objectives:

- To provide a broad understanding of Information Analytics as a competency.
- To facilitate the exploration of the rich possibilities of practice in the field.
- To convey a basic understanding of the challenges and requirements for information transfer, and for knowledge organization and management in various information environments.
- To develop a conceptual framework for understanding the relations between Information Analytics, technological developments and the changing nature of the profession.
- To establish an awareness of the primary ethical and policy issues associated with Information analytics.
- To develop an awareness of the technology currently available and emerging for text mining and visualization , and the diversity of scholarly and research activity.

Class 1: Introduction to Information Analytics is a MetaLiteracy

May 23, 2013

The ability to transform data into actionable knowledge. Knowledge that we can use in pursuit of a specified objective(s)

Required Readings:

📄 ***Reframing Information Literacy as a Metaliteracy.***
📄 ../../literacy/62.full%23page=1&view=FitH.pdf

> Mackey, Thomas P, Jacobson, Trudi E. (2011)
> College & Research Libraries vol. 72 no. 1 62-78

📄 ***The (Common) Sense of KM.***
> Koenig, Micheal E.D, Jank, David A
> Journal of Information & Knowledge Management, vol 11, No. 2, 2012.

Class 2: Meta-Literacy

May 30, 2013

Information Literacy in education and work place

The idea of information literacy defined as the ability to recognize information needs and identify, evaluate and use information effectively has been a growing concern in the education sectors for years. In the workplace the focus has been on computer and information technology skills. Students will Focus on the differences and interrelations between individual and organizational information literacy .

Required Readings:

📄 ***Workplace experiences of information literacy.***
Bruce, Christine Susan
International Journal of Information Management 19 (1999) 33-47

Media Literacy

The ability of a citizen to access, analyze and produce information for specific outcomes = provides a framework to access, analyze, evaluate, create and participate using messages in a variety of forms – focuses on accessing , analyzing and evaluating information but a stronger emphasis on creating and participating, which together builds an understanding of the role of media in

4

society as well as essential skills of in query and self-expression necessary for citizens of a democracy so it is framed with a larger social context.

Required Readings:

Media literacy and the challenge of new information and communication technologies.
Livingston, Sonia
The Communication Review: 7:3-14, 2002.

Class 3: Digital Literacy

June 6, 2013

The ability to access networked computer resources and use them.

The ability to read and interpret media (text, sound, images) to reproduce data and images through digital manipulation and to evaluate and apply new knowledge gained from digital environments.

Visual Literacy

This relates to the evaluation and use characteristics of information literacy but this competency is focused on visual and design issues than standard definitions of information literacy. A visually literate person visual communication.

Required Readings:

Information mining — Reflections on recent advancements and the road ahead in data, text, and media mining.
\\RTTMSGFP161\harrisol$\literacy\science.pdf R. Gopal et al.
Decision Support Systems 51 (2011) 727–731.

Class 4: Cyber Literacy **(specific to the Internet and Web environments)**

June 13, 2013

The ability to voice an opinion about what these technology should become and being an active not passive participant in the development of the technologies.

Information Fluency –

Focus on engagement with ideas rather than just learning how to use a computer.

A set of intellectual capabilities, conceptual knowledge and contemporary skills associated with information technology.

Issue Paper I:

How skilled are you at information analytics and why and how was this knowledge acquired? Provide evidence to support your argument- examples illustrating MetaLiteracy when you were able to transform date into actionable knowledge that can be used to pursuit of a specific objective

Class 5: Text mining and information visualization tools - a means to further metaliteracy

June 20, 2013

The process of extracting interesting and non-trivial patterns or knowledge from text documents.

Required Readings:

[Data Mining for Information Literacy.](#) Bettina Berendt (2011) Dawn E. Holmes and Lakhmi C. Jain. (Eds.), Data Mining: Foundations and Intelligent Paradigms. Springer

Issue paper II:

Is information analytics a competency and what is the impact of having or not having it on knowledge managers and their customers/organizations/stakeholders?

Class 6 -7: TEXT MINING: BASIC CONCEPTS

June 27, 2013

- Introduction to Quosa – hands on (must have access to following)

Required Readings:

Text Mining: The state of the art and the challenges.
../../literacy/tm_pakdd99.pdf
Tan, Ah-Hwee
In Proc of the Pacific Asia Conf on Knowledge Discovery and Data Mining PAKDD'99 workshop on Knowledge Discovery from Advanced Databases, pages 65–70, 1999.
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What is Text Mining?

Hearst, Marti

Class 7-8: Text mining and visualization tools

July 11, 2013 & July 18, 2013

- Introduction to BizInt –

Text mining and visualization tools – Impressions of   emerging capabilities
Data visualization tools—a perspective from the pharmaceutical industry

Required Readings:

Data visualisation tools--a perspective from the pharmaceutical industry.
J Eldridge
World Patent Information, 2006.

Text mining and visualization tools Impressions of emerging capabilities.
YY Yang, L Akers, T Klose...
World Patent Information, 2008.

SCIENCE AND TECHNOLOGY TEXT MINING: BASIC CONCEPTS.
file://///RTTMSGFP161/harrisol$/literacy/science&techtextmining.pdf
Losiewicz, paul, Oard, Douglas W, Kostoff, Ronald

Class 9-10: Student Presentations: Examples of implementation in various areas of work and study (students will be encouraged to identify others of interest to them to report on one or experiment with something they identify or create)

July 18 & July 25

Suggested Readings:

[PDF] *Text Mining: Generating Hypotheses From MEDLINE.*

Srinivasan, Padmini
JOURNAL OF THE AMERICAN SOCIETY FOR INFORMATION SCIENCE AND
TECHNOLOGY, 55(5):396–413, 2004.

[PDF] *The Determination of Children's Knowledge of Global Lunar Patterns from Online
Essays Using Text Mining Analysis.*

Cheon, Jongpil, Lee, Sangno, Smith, Walter, Song,k Jaeki, Kim, Yonjin
Res Sci Educ. 2012 DOI: 10.1007/s11165-012-9282-5

[PDF] *ChemicalTagger: A tool for semantic text-mining in chemistry.*

Hawizy L, Jessop DM, Adams N, Murray-Rust P
J Cheminform. 2011 May 16;3(1):17.

[PDF] *Mining external R&D*.

Porter, Alan L, Newman, Nils C
Technovation 31 (2001)171-176.

[PDF] *OSCAR4: a flexible architecture for chemical text-mining*.

Jessop DM, Adams SE, Willighagen EL, Hawizy L, Murray-Rust P
J Cheminform. 2011 Oct 14;3(1):41.

[PDF] *Categorizing Top Fortune Company Mission and Vision Statements Via Text Mining.*

Alshameri, Faleh, Greene, G. Robert, Srivastava, Mukesh
Decision Support Systems 51 (2011) 727–731.

[PDF] *PESCADOR, a web-based tool to assist text-mining of biointeractions extracted
from PubMed queries*.

Barbosa-Silva A, Fontaine JF, Donnard ER, Stussi F, Ortega JM, Andrade-
Navarro MA
BMC Bioinformatics. 2011 Nov 9;12:435.

[PDF] *Scientific workflow systems: Pipeline Pilot and KNIME*.

Warr WA

J Comput Aided Mol Des. 2012 May 27.

State Education Department Requirement: 150 Hours

The New York State Education Department requires students to complete 150 hours of work for a 3-credit course. The hours were determined as follows:

Assignment or Activity	Hours
Class meetings (10 weeks @ 2 hours/week)	20
Online Hours (11 papers @ 2 hrs)	44
Reading Hours (7 weeks @ 3 hrs)	21
Project Proposals (2 @ 15 hrs)	30
Term Paper /project (Information Analytics pertaining to a specific area of interest)	35

C.W. Post Academic Conduct Policy

"The Academic Conduct Policy of the C.W. Post Campus promotes an academic community characterized by respect, honesty, originality, and fairness. Academic misconduct such as plagiarism, cheating, fabrication, sabotage or assisting someone in the committing of any of the acts, is a violation of this Policy. Any student found engaging in academic misconduct is subject to disciplinary action.

"Information about the Policy and resources to prevent violating it can be found in the Academic Conduct Policies and Standards section of the Web site. All students are required to review the contents of the website located at:

http://www.liu.edu/CWPost/StudentLife/Services/Counseling/AcadPolicies/Conduct.aspx

"Students are also required to familiarize themselves with all university policies as outlined in the student handbook and the university website. If you have any questions about the policies, please speak to your professor."

Disability Services

If you are a student with a disability and require accommodations, please contact the Learning Support Center in Post Hall (lower level, East wing) at 299-3057 during the first week of the semester.