Selected Readings for Module 6

Web of Documents

1. Linked Data: Evolving the Web into a Global Data Space (Chapter 1), by Tom Heath and Christian Bizer Online Available at: http://linkeddatabook.com/editions/1.0/

   Short Description: This book gives an overview of the principles of Linked Data as well as the Web of Data that has emerged through the application of these principles. In the context of this module, the first chapter of this book (Introduction) is especially relevant and it describes in detail the shortcomings of un-structured data and how structured data can help to overcome these shortcomings.

2. What is Web Page – https://en.wikipedia.org/wiki/Web_page_ Wikipedia article –

   Short Description: This Wikipedia article gives an overview of basic elements upon which a webpage is constructed, rendered and processed. This article offers a basic understanding of webpage architecture, HTML, Web Browser, Static and dynamic webpages.

3. What is Semantic Web, By W3C - http://www.w3.org/RDF/FAQ – License information -

   Short Description: This popular W3C wiki page clarifies basic understanding about the Semantic Web and its vision? It comprehensively answers questions like: What is the Semantic Web and why it is needed? How does the Semantic Web relate to Artificial Intelligence, Web 2.0, tagging etc.? How do I participate in the Semantic Web?

4. What is the World Wide Web? - Twila Camp : https://www.youtube.com/watch?v=J8hzJxb0rpc

   Short Description: An introductory video about World Wide Web which explains the elements it consists of and how it works as a whole. Very nicely illustrated to clarify basic concepts of the Internet and the Web.

5. Intro to the Semantic Web, by Manu Sporny :
   https://www.youtube.com/watch?v=OGg8A2zfWKg

   Short Description: An introductory video about the Semantic Web. Nicely illustrated slides explain the basic building blocks of the Semantic Web and why it was needed. It also showcases the shortcomings of the conventional web and why structure data is important.

Web of Data

1. Linked Data: Evolving the Web into a Global Data Space, by Tom Heath and Christian Bizer
   Online Available at: http://linkeddatabook.com/editions/1.0/

   Short Description: This book gives an overview of the principles of Linked Data as well as the Web of Data that have emerged through the application of these principles. The book discusses patterns for publishing Linked Data and describes deployed Linked Data applications and examines their architecture.

2. Linked Open Data: The Essentials A Quick Start Guide for Decision Makers, by Florian Bauer, Martin Kaltenböck. Online Available at**:** http://www.reeep.org/LOD-the-Essentials.pdf

   Short Description: This is a quick start guide for decision makers who need to quickly get up to speed with the Linked Open Data (LOD) concept, and who want to make their organization a part of this movement. It gives a quick overview of all key aspects of LOD, and gives practical answers to many pertinent questions.

3. Design Issues: Linked Data, by Tim Berners-Lee:
   http://www.w3.org/DesignIssues/LinkedData.html

   Short Description: The Semantic Web isn't just about putting data on the web. It is about making links, so that a person or machine can explore the web of data. This popular article by Sir Tim Berners-Lee serves as a guideline to apply the four rules which are needed to achieve the objective of Data Publishing and interlinking.

4. Linked Open Data - What is it?, by Europeana (http://Europeana.eu) Access at:
   https://www.youtube.com/watch?v=uju4wT9uBIA

Introductory Videos: – License information - Youtube videos are CC BY license

Short Description: A simple animation to explain what Linked Open Data is and why it is a good thing, both for users and for data providers.

5. What is Linked Data, by Manu Sporny Access at:
https://www.youtube.com/watch?v=4x_xzT5eF5Q

Short Description: A short non-technical introduction to Linked Data, Google's Knowledge Graph, and Facebook's Open Graph Protocol.

6. The next Web of open, linked data, by Tim Berners-Lee . TED talk Access at:
http://www.ted.com/talks/tim_berners_lee_on_the_next_web?language=en
https://www.youtube.com/watch?v=OM6XIICm_qo

Short Description: 20 years ago, Tim Berners-Lee invented the World Wide Web. For his next project, he's building a web for open, linked data that could do for numbers what the Web did for words, pictures, and videos: That is, unlock our data and reframe the way we use it together. A comprehensive TED talk by Tim Berners-Lee putting the case forward for Linked Open Data.

7. How to Publish Linked Data on the Web tutorial by Tom Heath, Michael Hausenblas, Chris Bizer, Richard Cyganiak, Olaf Hartig, from ISWC2008, Karlsruhe, Germany. Access at:
http://videolectures.net/iswc08_heath_hpldw/
– License information - VideoLectures.NET is an open access educational video lectures repository

Short Description: This tutorial will provide participants with a solid foundation from which to begin publishing Linked Data on the Web, as well as to implement applications that consume Linked Data from the Web.

8. The Web, one huge database ... screen-cast by Michael Hausenblas. Access at:
http://www.youtube.com/watch?v=zwbs4ej0gpc
– License information - Youtube videos are CC BY license

Short Description: Attempting to reach out to Web developers, this screen-cast is about how one can understand the Web as one huge database. The screen-cast starts out with a short explanation of some essentials, followed by two hands-on examples (DBPedia and a FOAF profile).

Social Media

1. What is Social Media?
   http://en.wikipedia.org/wiki/Social_media
   Short Description: This Wikipedia article gives a brief introduction to social media and its relation to Web 2.0 and to the concept of user-generated content. Besides general information about managing social media, as well as its effects on society, the article also discusses criticism of social media.

2. O'Reilly, Tim (2005). What Is Web 2.0. O'Reilly Network.
   http://www.oreilly.com/pub/a/web2/archive/what-is-web-20.html

   Short Description: This article explains Web 2.0 and its core differences to Web 1.0. It shows many examples and discusses how the Web 2.0 paradigm changes design patterns and software business models.

3. OECD (2007). Participative web and user-created content: Web 2.0, wikis, and social networking. Organisation for Economic Co-operation and Development.
   http://www.oecd.org/sti/ieconomy/participativewebanduser-createdcontentweb20wikisandsocialnetworking.htm

   Short Description: This study describes the rapid growth of user-created content (UCC) and its increasing role in worldwide communication, and draws out implications for policy formulations.

4. Kane, Gerald C. (2015) Enterprise social media : current capabilities and future possibilities, MIS quarterly executive ; 14 (2015):
   http://www.econbiz.de/Record/enterprise-social-media-current-capabilities-and-future-possibilities-kane-gerald/10010499516

   Short Description: This article provides a platform-independent framework for considering the effects of social media on enterprises. The framework comprises of two fundamental capabilities of social media: establishing social networks and accessing digital content; and the two impacts these capabilities have on organization—employee performance and user behavior.

5. Nicholas, David and Rowlands, I. (2011). Social media use in the research workflow. Information Services and Use, vol. 31, no. 1-2, 2011, pp. 61-83
   http://iospress.metapress.com/content/23032G726121KQW4

Short Description: The paper reports on a major international questionnaire survey that investigated the use of social media in regard to the research workflow. In a study of more than 2000 researchers, it was shown that social media impact on all points of the research lifecycle, from identifying research opportunities to disseminating findings at the end**.**

Science 2.0

1. Science 2.0 explained
   https://www.youtube.com/watch?v=Bqo46r_yIoU

   Short Description: Introductory video about Science 2.0 and its main research pillars.

2. Waldrop, M. M. (2008) Science 2.0: Great New Tool, or Great Risk? Scientific American. http://www.scientificamerican.com/article/science-2-point-0-great-new-tool-or-great-risk/ (Blog)

   Short Description: The article describes how researchers are beginning to harness wikis, blogs and other Web 2.0 technologies as a potentially transformative way of contributing to and being involved in science.

3. Burgelman, J.–C. & Osimo, D. & Bogdanowicz, M. (2010). Science 2.0 (change will happen....). First Monday (July 2010).
   http://firstmonday.org/ojs/index.php/fm/article/view/2961/2573

   Short Description: This paper outlines some of the main trends and changes that the authors consider will affect science over the next 20 years, mainly driven by a new socio–technological paradigm, which results from the use of information and communication technologies. It analyzes the three main trends: growth of scientific authorship, growth in scientific publishing, and growth in data availability and processing.

4. Fausto S, Machado FA, Bento LFJ, Iamarino A, Nahas TR, Munger DS (2012) Research Blogging: Indexing and Registering the Change in Science 2.0. PLoS ONE 7(12): e50109. doi:10.1371/journal.pone.0050109.
   http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0050109

   Short Description: The Research Blogging platform was created in 2007 and there are now a lot of active blogs about peer-reviewed research on subjects ranging from Anthropology to Zoology. This study takes a closer look at Research Blogging, in order to get insights into its contribution to the rapidly changing landscape of scientific communication.

5. Fecher, B. & Friesike, S. (2013). Open Science: One Term, Five Schools of Thought. RatSWD Working Paper Series 218.

   http://www.ratswd.de/dl/RatSWD_WP_218.pdf

   Short Description: Open Science is an umbrella term that encompasses a multitude of assumptions about the future of knowledge creation and dissemination. Based on a literature review, this paper aims at structuring the overall discourse by proposing five Open Science schools of thought: The infrastructure school, the public school, the measurement school, the democratic school and the pragmatic school.

6. Friesike, S., Widenmayer, B., Grassmann O., Schildhauer, T. (2014). Opening science: towards an agenda of open science in academia and industry. The Journal of Technology Transfer (November 2014).
   http://link.springer.com/article/10.1007/s10961-014-9375-6

   Short Description: This paper presents a conceptualization of open science as a new research paradigm. Based on empirical data and current literature, the phenomenon is analyzed and four perspectives of open science are proposed. Furthermore, current trends and propose directions for future developments are outlined.