**BIG DATA IN THE MEDICAL DOMAIN: DEALING WITH UNSTRUCTURED DATA**

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**Outline**

Big data applications in the Healthcare Sector indicate a high potential for improving the overall efficiency and quality of care delivery.

Unstructured data represents a powerful untapped resource—one that has the potential to provide deeper insights into data and ultimately help drive competitive advantage. This unstructured data now makes up a very significant portion of the data, and all kind of companies care rapidly exploring technologies for analyzing this kind of data to gain competitive advantage. Solutions to analyze these kinds of data can be applied in other domains using similar nature data sources.

In the healthcare sector, big data analytics has still to address several technical requirements such as: i) use of Electronic Health Records (EHR) and its implications; ii) preprocessing of natural text iii) annotation of images; iv) dealing with data silos and building of solutions avoiding them, etc..

This seminar will be focused in the presentation of medical informatics problems, with a special focus in medical knowledge acquisition, it’s use and it’s analysis

**Syllabus**

1. Big Data challenges and problems to be addressed in the medical domain  
2. Dealing with Big Data from a medical imaging analysis perspective  
3. Human disease networks: large-scale creation and analysis

**Assessment Method**

Participation in the class plus a practical exercise.

**Prerequisites**

Java Programming language will be a plus to understand the NLP exercise.

**Credits**

0.5 ECTS

**Remarks**
For last minute information, consult the document.

**Recommended Reading**

Material

**Timetable**

- 15 February, 15.00 - 18.00

**Lecture Theatre**

A-6201

**Tuition Language**

English.

**Capacity:**

50

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