BMI 506: Clinical Decision Support

**Assignment: Motivate the development of the proposed clinical decision support system**

In this assignment, students demonstrate their ability to do the following:

* develop a literature search strategy that could lead to: a review of the clinical problem addressed, a review of the state of the art on existing DSS solving the chosen problem
* develop and apply eligibility criteria to retrieved publications
* conduct a search and apply the eligibility criteria to retrieved publications
* describe the results of their search and application of the eligibility criteria
* identify limitations of the conducted search
* analyze the retrieved results and justify the novelty and need for the DSS that you propose. What is different from what you propose and what is already available? Why is the problem that you are addressing important?
* choose a set of significant clinical use cases that will lead the development and test of the proposed DSS

TYPES OF STUDIES TO BE IDENTIFIED IN SEARCH: clinical guidelines that provide evidence-based advice on the chosen clinical problem, research studies that explain and test CDSS addressing problems similar to the chosen one

LITERATURE TO BE SEARCHED: MEDLINE, GOOGLE SCHOLAR, PUBMED

You could limit the clinical guideline search to the most used or adopted guideline. You will limit the research studies search to the most recent or significant (for instance the most cited ones).

REPORT:

The report (3-5 pages) that contains the following:

1. Description of the search strategy
2. Description of the eligibility criteria and the rationale
3. The results of the search (publications identified) and the application of the criteria (publications considered eligible after applying the criteria)
4. Description of the limitations of the search
5. Summary of the conclusions:

* explain clinical relevance of the chosen clinical problem
* which medical evidence (guidelines) are you choosing as the most relevant for the chosen clinical problem, and why
* which clinical use cases will you select for the deployment and testing of the CDSS and why
* state of the art on CDSS solving similar clinical problem, why is your approach different or novel

GRADES:

Each member will be asked to describe what contribution s/he made to the report.

Each member of the group will be asked to rate the contributions of other group members as GOOD, FAIR, OR POOR.

A grade will be given to the group report (A, B, C, D, F). The grade will be based on the following.

Comprehensiveness of search 25

Description of eligibility criteria 25

Presentation of results of application of criteria 25

Any problems encountered and limitations that might arise because of these problems 25

The self- and peer appraisals will be used to award extra credit points to members of the group who make contributions that are more than average and to deduct points for members rated as making a poor contribution by the other members of the group.

The assignment is due on February 9, 2015 before class.

This assignment contributes to 10% of your overall grade.