

CSCI586: Database Systems Interoperability

Fall 2017

Group Projects

Professor Dennis McLeod

The course project is meant to give you an in depth understanding and practical experience using many of the things we cover in the papers we read, present, and discuss. As noted in class, our focus is largely on semantic web and related research and technology. Since this is a broad field, there can be a variety of interesting projects that can be done depending on your interests. This can also extend to related and complementary topics that are taught in class. Almost always, a comprehensive project covering a broad range is proposed and is to be done as a group of 2-4 students (and all members must be from the same class section - Monday or Wednesday).

Project groups should start as soon as possible on the project, as these things tend to take longer than anticipated!

This semester, each group will research, develop, build, and demonstrate a “federated ontology system” as discussed in class.

To move things along, please submit your group information to the course staff (Professor, TA, and Course Producer) by September 15. The sooner the better! If you need help finding group member(s), we can try to assist. Please also refer to the students and email list for your section on the course web site.

Below is a list of possible topics areas. You can choose something given here, or you can propose a creative variation. You can also propose a custom project, as long as it is within the scope of the course.

- Explore and classify images of some selected kind from several sources; provide a demonstrable query or access interface; use ontologies and be sure to choose the sources that they have enough in common to inter-relate them, but may have different representations.
- Construct an ontology-based system to make a web site “semantic” (e.g., <http://imscdmim.usc.edu>)
- Construct a system that records information about books, videos, audios available in a given a specific topic area - which movies became books, which books became movies, etc.
- Create an interconnected network of artists, painters, actors, athletes, or other entities, and determine and measure influence, and/or other centrality based metrics.
- Integrate social media streams (e.g., Twitter, Instagram) with entities (e.g., movies, TV shows, songs, artists) or events (e.g., concerts, conferences, sporting events) to capture relevant user chatter and measure popularity, buzz, opinion, etc.
- Semantic integration of various previously un-linked collections and/or catalogs, such as course catalogs, museum collections, music catalogs etc. Using a museum collection is presented as an example and has been done before. Students choosing this direction should use a different type of catalog.

You are free to use ontology tools and techniques in doing your project (e.g., Protege)

The project topic must be approved by September 22, 2017. Please email this to the Professor, TA, and course producer. This also applies to “standard” and customized and other projects. Go ahead and show off your creativity! In the past there have been CSCI586 projects that produced several technical papers that were published!

The project will be graded, and is 35% of your course grade. Grading breakdown of the course project:

Final Results 10%

Methodology and creativity of solutions 10%

Final report (written in the form of a technical conference paper): 5%

Presentation and Oral Q&A: 10%