

CISC 7610, Final Project

Prof Michael Mandel

Due: May 16, 2016

1 Overview

- This is the final project for the class
- It is due on **May 16, 2016**
- It consists of three parts:
 - A written document
 - An in-class presentation
 - Submission of a working system with data OR the URL of a working web-based system
- Please submit your document, system, and slides to the dropbox on BlackBoard

2 Instructions

This project is worth 40% of your final grade in the class, broken down into 10% for the presentation, 20% for the writeup, and 10% for your submitted system and data.

The goal of the project is to build a multimedia database, populate it with a moderate amount of data for a specific use-case, and query it for that same use-case.

2.1 Presentations (10% of final grade)

Each presentation will be allocated 12 minutes for the main presentation and an addition 3 minutes for a question and answer period. Presentations can either use the podium computer or your own laptop. If you plan on using the podium computer, please copy your presentation onto it before class begins. If you plan to use your own laptop, please test it with the projector before class begins. Presentations must show (excerpts from) at least two pieces of multimedia that are indexed by the system and demonstrate at least one query of the system. The demonstration could be simulated, but it is encouraged that you show a live demo or record a screen-cast of the system in action.

The slides for your talk are due **before class on May 16, 2016**.

2.2 Papers (20% of final grade)

Papers should use the formatting guidelines and templates of the 2016 IEEE Conference on Acoustics Speech and Signal Processing (ICASSP), available at <http://www.icassp2016.org/papers/PaperKit.html#Templates>. The text of the paper should be 4 pages long, while references can go onto a fifth page. It

should include at least one system diagram, two example pieces of multimedia, results from one example query, and at least one graph of some performance measure. This performance measure could be precision, recall, F1 score, or another measure of your choosing.

The papers are due **before class on May 16, 2016**.

The paper should be modeled on one that you might present at a computer science conference, like ICASSP. So a research paper, meaning explaining experimental research that you have done. Here are some example papers of mine that might provide a useful reference:

- <http://m.mr-pc.org/work/waspaa15.pdf>
- <http://m.mr-pc.org/work/interspeech14.pdf>
- <http://m.mr-pc.org/work/icassp14a.pdf>

A recommended outline for the paper would be:

1. Introduction of problem
2. Literature review of related approaches
3. Technical description of system
4. Experiments testing system
5. Conclusions and future work

2.3 System and data (10% of final grade)

The submitted system should be able to run on linux, windows, or Mac OS X. It should include precise instructions for how I should run it to index the files that you provide and perform at least three queries that you provide. It should include a pre-populated version of the database that I can run on my computer without running the indexing command, but it should also include all of the multimedia files that the indexing command will index. You should supply at least three queries for me to run on the system that fully exercise its capabilities and demonstrate that the database is solving the proposed use-case.

Instead of submitting the software for me to run locally, you may submit the URL of a live web-based system. In this case, it should be pre-populated with data. Please still supply me with three queries to run on the system to fully exercise it. If those queries are performed using another piece of multimedia (query-by-example), then please provide that with your submission.

Systems and data are due **before class on May 16, 2016**.