CSCI 4972 Introduction to Visualization
Assignment #6 Initial Final Project Proposal
Due: Tuesday October 12th at 11:59pm

The final projects for this course will be presented/exhibited/demo-ed in EMPAC's Studio 2 during the last 2 weeks of the semester. We will have access to a variety of projection screens & projectors (& audio equipment if desired). Let's start a discussion of how we will use the space, and form teams to begin to develop our ideas and implement these projects.

Your project topic is totally open. Graduate students are highly encouraged to combine their research with the final project for this course. Bring data from your research and develop imagery or videos that you can use to debug your work, analyze data, and communicate results in future papers or presentation of your research. Undergraduate students are encouraged to team up with graduate students and learn about and aid in research they find interesting or to combine the final project from this course with the final project of another course. You are highly encouraged to form teams for the final projects, so you can tackle bigger challenges within the timeframe of the the final project for this course. Individual projects will be allowed with approval of the instructor. Please use LMS to form teams and discuss ideas.

The presentation of your project in EMPAC can take on a variety of forms, for example:

- The most straightforward presentation mode (and simplest system implementation) will be static images or a video that can be shown on a single high resolution projection screen. This presentation mode should be accompanied by a short text description (think slide show) or spoken audio recording of the visualization.
- A slightly more involved system will involve some form of interaction with a viewer. This could be through mouse & keyboard interaction with a desktop or laptop computer in the studio. This can be extended to take data from multiple users, perhaps through smart phones, etc.
- Your project could access & display real-time data from the internet.
- We can take advantage of projection on multiple surfaces in the studio. We can setup additional projectors to display on side screens, or even on the floor.
- We have a system to perform tracking and projecting on custom objects within the studio (video shown in class). This could be extended for other purposes (warning: general purpose tracking is very difficult!).

Timeline

- By Friday Oct 8th @ 11:59pm, please make a short post on LMS with your initial ideas.
    - Do you already have a (possible) topic? If so, what is it?
    - Are you looking for additional people or are you looking to join a team?
    - What skills can you bring to the project? What skills would you like to learn more about in doing the project?
    - What form of presentation are you interested in pursuing?
- Meet with a potential final project team and bounce around ideas. Create a preliminary proposal document (.pdf or .txt + optional images) and submit it to LMS by Tuesday Oct 12th @ 11:59pm. This document should:
    - Overview the purpose of the project

    - Identify the team members and their skills/interests
    - Identify some initial background reading (e.g., books or academic papers)
    - An initial “todo list” of technical tasks & priorities
- Tuesday October 26th, 5pm: Progress Report due followed by in-class critiques
- Tuesday November 9th, 5pm: Progress Report due followed by in-class critiques
- November 22nd-December 3rd: Project Development in EMPAC Studio 2
- December 6th-December 10th: Project Presentations (open to public)

General Final Project Requirements & Grading Criteria

- Creativity & Design (20%)
- Background & Related Work Survey (10%)
- Technical programming implementation (does not need to be C++ or VTK) (25%)
- Teamwork & Progress Reports & Intermediate Results (30%)
- Final Report (5%)
- Presentation & Peer Evaluation (10%)