

**EN 605.662: Data Visualization**

Final Project

Due: Last Day of Module #14

I. Overview:

The final project is a significant part of the course, it allows students to synthesize the concepts learned throughout the semester and apply them to their own datasets and/or to their particular area of interest. The final project grades will be based on the following components:

- Draft Proposal (10%)
- Revised Proposal (10%)
- Literature survey (10%)
- Final video presentation (20%)
- Final project (i.e. paper, code, program, documentation, etc...) 50%)

II. Project topics:

Your first task is to pick a project topic. To come-up with project ideas we suggest for students to:

- Consider extending any of the project assignments to include new features that leverage state-of-the-art visualization techniques
- Think about research topics that are of personal interest
- Review some papers in Data Visualization, Visual Analytics, and Scientific Visualization
- Think about research ideas that are relevant to your work
- Consider extending any of the examples presented in the reading material distributed through out the semester

III. Project Proposals: (Draft 10% + Revised 10%)

Proposals should be about 1-2 pages long. They should include:

- A description of your topic
- A detailed plan of how the project will get done
- A detailed timeline.

Proposals must be submitted online in a file named <last_name>_proposal.pdf. Instructor will provide comments and students must submit a revised proposal with updated project plan and timeline.

**IV. Literature survey (10%):**

Students are required to submit an annotated bibliography.

- Create an annotated bibliography containing at least 5 references related to your chosen topic.
- Write a short (e.g., 3-5 sentence) description of each reference, giving its focus and major contribution. Include a complete citation for each reference.
- Write a brief introduction to your bibliography to define the topic and scope of your bibliography.

Literature surveys must be submitted online in a file named <last_name>_bibliography.

V. Final Video Presentation (20%):

Students will upload into a discussion board a video presentation with a 2-5mins presentation of the final project. As part of the presentation, students will introduce the problem, discuss previous work, describe what was accomplished as part of the final project, and even demo potential dashboards and visualizations created for the final project.

VI. Final Project (50%):**A) Final paper**

The final paper must be submitted by the due date. The final paper should include the following sections:

- Abstract: paragraph summarizing of the paper
- Introduction: section introducing the research problem
- Background: discussing some of the previous work
- Approach: describes what was accomplished
- Results: describes the results
- Conclusion: concludes the paper

The length of the final paper should be between 4-10 pages at double-spaced plus references. Additional supporting material of any length can be put in appendices. Use of figures is strongly encouraged.

B) Final Program

Students must submit the application, code, and tools that were developed to create the project. The submission should include:



- Dashboard and/or Source Code of the program developed
- Documentation about how to run the code
- Sample dataset(s) that were used to test the system.