

Data Visualization Semester Project

Notes for CSE 591

Instructor: Ross Maciejewski

1 Project Guidelines

Students will create a project team of 2-4 people, with workload expectations being based on the team size. The goals of this project is to take the knowledge and background that you are learning this semester in Data Visualization and utilize it in a new, creative effort. In this project, each team will select a data set that people will find interesting and intriguing. You may scrape the web to find or create your own dataset, or, even better, you may find a clearly identified set of “users” or “analysts” that will provide you with data as well as guidance in analyzing the data.

No matter what data set you choose to explore, I am expecting a high-quality project. Particularly, your work should be creative to showcase interesting ideas and findings. A good project will consist of visualization designs and software that implements these designs and allows you to explore your data. Interaction is a key component in Data Visualization.

You are free to use any software development environment and graphics/visualization support library that you want in order to help build your system. Furthermore, consider developing a system that is web-deployable so that your work can be shown to the world.

For this project, your team will have four milestones/deliverables. First, you must form your team and choose a topic. Second, you will submit a detailed design document. Third, you will give a demonstration of your project to the instructor and TA with an in-class presentation. Finally, you will produce a short video (8 minutes or less) that explains your system and shows it in action along with a descriptive document as well.

2 Milestones

- **January 23rd (5PM)** – Initial project description. A one page document listing project members and the topic to be addressed. (10%)
- **February 20th (5PM)** – Project design ideas. This will be an analysis of the problem. The team should create a write up of the data and describe why someone would care about analyzing this data. An accompanying PowerPoint presentation with mock-ups and/or storyboards of different visualization ideas that your group will be developing will also be included. (30%)
- **April 10th (5PM)** – Project demonstration. Each team will submit their PowerPoint slides for the in-class presentation. Presentations will take place in class over the following weeks. All presentations are due on this day, regardless of when they will be presented. (30%)
- **April 29th (5PM)** – Final project documentation, source code and video. A final report and video detailing what your project has explored and an accompanying video is due. (30%)

3 Grading

The class project is worth 40% of the overall course grade. Each milestone will contribute to the project grade as defined above. It is important that you make progress on the project quickly. This will allow you more time for implementation. As this is a computer science class a working implementation is a key component of your grade.

The following questions will be important during that evaluation process.

- Does the system work, i.e., does it read in the data and present an interactive visualization of the data?
 - Is the visualization an effective representation of the data?
 - Does the visualization support different analytical questions about the data?
 - Is the visualization creative and does it illustrate some new ideas? (While it is not necessary to invent some new visualization technique for the project, designs that illustrate creativity and new thinking will generally be viewed positively. Of course, innovation cannot be a total substitute for utility.)
 - Was your demonstration an effective presentation and illustration of your project and work?
 - Does your video illustrate your system and its use well? Does it explain the problem and solution well enough so that a person unfamiliar with the project can appreciate your contribution?
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- Late projects will not be accepted:
 - No assignments accepted after deadline
 - The myASU timestamp will show when you uploaded your project.
 - If you have **good reasons** that you cannot complete a project on time **and** you have written documentation, then we can make adjustments to due dates. However, you must notify us before the due date that you would like to discuss such an arrangement. Good reasons would be illness, family emergency, visiting a conference to present a paper, ...
 - All the University, Student Life and Fulton School academic integrity policies hold: <http://www.asu.edu/studentlife/judicial/integrity.html>