Syllabus | Data Visualization, Spring 2016

This course Syllabus is for the Spring 2016 Data Visualization class at the University of Texas at Austin Journalism school.

Description

As the era of Open Government and Open Data evolves, more stories are being told through data and data visualization than ever before. In this course, you'll learn how to acquire compelling data sets, clean them, analyze the contents using visualization techniques to find storylines, and then present that result through a variety of methods, including online interactive charts and maps.

Objectives

To be able to find data sets that form a foundation of compelling journalism, and present that data in such a way that readers learn more about the subject.

You should expect to learn:

- What makes a good data visualization. What is the proper method to show and explain different types of data.
- Where to find and how to request data sets from public and private sources.
- How to clean up, format and analyze data to prepare for online interactives.
- How to use a variety of applications and tools (Microsoft Office products, Tableau, CartoDB) to find trends, outliers and other story lines, then build static and online visualizations.

Instructor

Christian McDonald
christian.mcdonald@utexas.edu
g) 512-537-2748
Office hours directly following class or upon request

Resources

Required text

- Nathan Yau's Data Points: Visualizations that Mean Something

Required resources

- Students will need an online blog that will allow publishing of javascript widgets and iframes. Google's Blogger meets this requirement. (Free WordPress.com accounts do not, though custom-hosted accounts can.)
- We will be using Tableau Desktop in class. It will be on lab machines in CMA 4.152, but

students will also be supplied with a license for personal machines that will last through the course.
- We'll be using Microsoft Excel in class. Education-priced versions are available at the UT Computer Store. You can get by just fine with Google Spreadsheets. There are also free alternatives like Libre Office and Open Office, though support is on your own.
- Students will need a code editor, and there are free open-source ones available. Mac: TextWrangler. PC: Notepad++. Both: Atom and SublimeText (badgerware).

Other useful resources

- Nathan Yau's Visualize This: The FlowingData Guide to Design, Visualization, and Statistics
- Paul Bradshaw's Finding Stories with Spreadsheets. Great resource on using Excel/Spreadsheets for $20.
- There are a number of other free and open-source software packages that we'll use in class that you may also want to load on personal computers. Details will evolve and be provided in class.

Grading

- (10%) **Participation**: Students are expected to come to class and participate in discussions and in-class assignments. This is a lab-centric course where skills are covered at a computer with instructor supervision. Missing that instruction puts you behind.
    - By UT Austin policy, you must notify me of your pending absence at least fourteen days prior to the date of observance of a religious holy day. If you must miss a class, an examination, a work assignment, or a project in order to observe a religious holy day, you will be given an opportunity to complete the missed work within a reasonable time after the absence.
- (20%) **Quizzes**: There will be several quizzes taken in class based from reading assignments and lectures.
- (30%) **Assignments**: There will be several in-class and homework assignments designed to help you practice and hone skills taught in the class.
- (40%) **Final Project**: This project will included a reported story (at least two sources) and an accompanying data visualization, based on pre-approved data sets obtained by the students.

Graduate students

In addition to all the assignments and projects outlined above, graduate students will have the additional requirements:

- Critique three online interactive visualizations in a format outlined by the professor.
- Final project requirements will differ slightly, with more sourcing, increased length and an additional visualization requirement.

Grading scale

The grading scale for the course will be as follows:

- A: 94-100
- A-minus: 90-93.99
- B-plus: 87-89.99
- B: 84-86.99
- B-minus: 80-83.99
- C-plus: 77-79.99
- C: 74-76.99
- C-minus: 70-73.99
- Anything below a 70 is failing

More important stuff

- Obey the honor code.
- Stay safe. Campus security and emergencies.
- Students with disabilities may request appropriate academic accommodations from the Division of Diversity and Community Engagement, Services for Students with Disabilities, 512-471-6259, http://www.utexas.edu/diversity/ddce/ssd/