**ECB 121- Data Visualization FYS**

**Individual Project**

This final assignment contains three parts: the paper the interactive dashboard, and the presentation. While separate guidelines are provided for each part, to help you manage your time, **complete the necessary tasks in the following logical order**:

1. Select a dataset tied to topic that interests you.
   1. EDUCATION - American University and College Data - The Integrated Postsecondary Education Data System (IPEDS) is the primary source for data on colleges, universities, and technical and vocational postsecondary institutions in the United States via the [National Center for Education Statistics](http://nces.ed.gov/ipeds/).
   2. BUSINESS - Startup Venture Funding Data - Information about startup companies, investment, and acquisitions via [Crunchbase](http://www.crunchbase.com/) . Use the Companies, Rounds, Investments, and Acquisition sheets.
   3. BUSINESS – Inc. Magazine’s list of 5,000 fastest growing companies – [The Inc. 5000](http://www.inc.com/inc5000/list/2014) is Inc. Magazine’s annual list of the 5000 fastest growing private companies in the United States. The list is compiled by measuring each company's percentage revenue growth over a four-year period.
   4. SPORTS – National Football League stats, 1993-2013 – Offensive statistics and personal information (height/weight/dob/combine info/college/conference) for NFL players from 1999-2013 via [pro-football-reference.com](http://www.pro-football-reference.com/)
   5. GOVERNMENT – 113th US Congress Voting Record – Every vote of the 113th US Congress via the [Sunlight Foundation's OpenCongress.org](http://www.opencongress.org/).There are two sheets, "Bills" contains the vote data whereas "Sunlight Info" contains additional meta data. You can join them on "Source URL."
2. Write a paragraph discussing your personal interest in the topic. Write a second paragraph discussing why the topic is important to society as a whole.
3. Examine the data carefully. Identify the variables you have. Understand their meaning and origin. What are the key variables of interest? Locate at least three conceptual relationships among the variables provided.
4. Write down three questions that can be answered with the data, specifically using the key variables on interest.
5. Who cares about the answers to these questions? Provide the name of a specific individual or company who wants the questions answered. In 1-2 paragraphs, discuss why the question is important. What specific decision(s) might this person or organization make using the data?
6. Sharpen your discussion about the audience’s interest by research. Read at least two quality sources that indicate how your audience would benefit from using the data at hand. Summarize your readings.
7. Rank the questions (4) by order of importance to the person or organization identified above (5).
8. Create an interactive dashboard for the person or audience identified in (5).
9. Revise the draft sections above into a single coherent document to accompany the dashboard.
10. Prepare a Powerpoint presentation addressing the audience identified (5).
11. Review. Revise. Practice.

**Paper guidelines:**

Your paper will follow the guidelines similar to those of Paper 1 as discussed on the first day of the course. Those guidelines included: focused topic, integration of knowledge, depth of discussion, and cohesion. Your papers should also satisfy the basic standards of college writing: correct spelling and grammar, zero tolerance on plagiarism, quality sources, and formalities. The expectations for the individual project differs slightly from that of Paper1. The length of individual project paper is twice as long. You are expected to use at least two quality sources to develop your discussion.

**Dashboard guidelines:**

Your dashboard should be interactive and contain at least three views. The viewer should have a common set of filters for all views. Within each view, you should follow best practices and techniques for the type of quantitative relationship you are displaying. Within each view, you should encode data so that the eye instantly catches the pattern you wish to have emphasized. In other words, correctly apply pre-attentive attributes.

**Presentation guidelines:**

You will have 10 minutes i) to motivate your topic; ii) motivate the creation of the dashboard; iii) share key findings. You are giving a professional presentation. Dress accordingly. Be prepared to field questions from the class for an additional 5-10 minutes.