BUAN 5210 Final Project
Professor Green Due 11:59 PM, Thursday, March 21

The goal of the Final Project is to combine the exploratory and explanatory data skills you have developed during the quarter to address a question using a Storytelling write up (with visuals) and a standalone interactive dashboard. The visuals you use for the write up and dashboard may need to be slightly different since the write up can depend on written description but the dashboard cannot. Think of the Storytelling write up as being similar to the Mid-term Project (but with more attention to Chapters 5 – 8 in Storytelling with Data) and the dashboard as being similar to Quick Project 2 with interaction (shiny). Note, the write up and dashboard are based on the same EDA but are two separate documents. You will need to develop a research question, gather data, perform basic and detailed EDA, check your results statistically, write up your analysis using a Storytelling approach and develop a standalone dashboard. Finally, we have discussed the importance of knowing your audience. You will need to specify your non-technical audience and clearly communicate what you want them to learn from your analysis (as discussed in Chapter 7 of Storytelling with Data). You must assume they are not familiar with the data.

There are three project deadlines:
1. Sunday 3/10, 11:59 PM: Research question and data source(s). This can be a short paragraph and links to the original data in a Word document.
2. Thursday, 3/14, 11:59 PM: Preliminary technical appendix in R Notebook.
3. Thursday, 3/21, 11:59 PM:
   a. Standalone interactive dashboard in R
   b. 3-page "Storytelling" write up in HTML, Word from RMarkdown, or Flexdash Storyboard that includes visuals
   c. 6 minute ARC video
   d. Technical appendix: documentation of EDA/visuals/dashboard in R Notebook

Dashboard:
1. Dashboard is **1-page**, with dashboard title and interactive visuals in R or PowerBI
2. Each visual should be self-explanatory with title, labels, legend and short annotations where necessary. Remember, don't try to use too many visuals.
3. If a PowerBI dashboard is used it must contain a model based graphic that changes with slicers. If shiny is used with flexdashboard, all graphs must be interactive.

Storytelling document:
1. 3-page document with visuals using RMarkdown in HTML, Word or Flexdash Storyboard, turn in the RMD file. **This can be a written document or a webpage**. Remember to render/knit your document after each step to simplify debugging. Follow the usual guidelines we have discussed about keeping visuals simple and to the point, with titles answering questions or prompting action.
2. Follow the general outline posed in Chapter 7 of Storytelling with Data. Specify your audience and tell them what you want them to do with the information in the story you are telling. Think carefully about the beginning, middle and end, and how to tie it all together. This is NOT easy, it will take some imagination—be creative and have fun.
3. I strongly suggest you leave plenty of time to have a friend review the write up/webpage and ask them to be brutally honest about being able to follow your story and its purpose.

Presentation: Your presentation should be made in ARC software from Canvas and should be limited to 6-minutes. You should follow much of the same guidelines as for the Storytelling document. The presentation should only be 4 – 6 slides long and you should assume the audience does not know the data set and problem you have chosen.

Technical Appendix: Your technical appendix can be the RMD file of your documented R Notebook with EDA including work you used for your dashboard and storytelling document. It is important that your work be reproducible by others, so make sure it is easy to follow.

Submission of final documents: Put your data, dashboard, storytelling document and technical appendix in zip folder and submit to Canvas. You will also submit the ARC file. If you have not used a zip folder before, type zip in the search bar of your operating system and follow the instructions. Test that you can do this before the due date.

Grading Rubric		
Category	Score	**Comments**
Data and research question – (10)		*Tidy data, from one or more sources, addressing specific question for appropriate audience*
Storytelling with Data – (10)		*Identify audience, story with beginning-middle-end, consistent graphs using best practices, recommendation-conclusion, clearly and concisely written with good grammar and no typos*
Dashboard – (10)		*Consistently formatted graphs using best practices, use of dashboard best practices, use of visual best practices, coherent story. If a PowerBI dashboard is used it must contain a model based graphic that changes with slicers. If shiny is used with flexdashboard, all graphs must be interactive.*
Presentation – (10)		*A 6-minute presentation describing your project, why it is important, the issue or problem being addressed and your recommendation. You should use ARC to capture screen shots and follow Storytelling with Data best practices.*
Technical Appendix – (20)		*Header, table of contents, clear, base EDA, detailed EDA, statistical EDA, data observations/questions, commented code*
Total	**/60**	

Point Allocation

100% – Meets all expectations **and exceeds** some for engagement and exploration
87.5% – Meets all expectations for engagement and exploration
75% – Meets most expectations for engagement and exploration
50% – Meets some expectations for engagement and exploration
25% – Does not meet any expectations for length, engagement and exploration