

**DS 4002 – Fall 2023**

**Submission format: Upload link to GitHub repo**

**Individual Assignment**

**General Description:** Submit to canvas a link to your case study repository.

**Why am I doing this?** This is your opportunity to synthesize the lessons learned during this course and prepare one of your projects for delivery through a different mechanism than the in-class presentation.

**What am I going to do?** You will establish an analysis plan and carry it out. The most challenging part of this assignment is knowing when you have achieved the goal laid out in the research plan and may switch gears to developing materials for presentation. Keep the goal in mind and make decisions to stay focused on that goal.

- A document detailing your analysis plan and findings.
- A slide deck to present your findings.
- Github repository with any data and code created

All of this will be submitted electronically via a link to a github repository.

Spec Category	Spec Details
Formatting	<ul style="list-style-type: none"><li>• One Github Repository (submitted via link on collab)</li><li>• The top level page should contain<ul style="list-style-type: none"><li>○ A README.md file (which auto displays)</li><li>○ A LICENSE.md file (use MIT as default)</li><li>○ A Analysis.md file (description of Analysis plan and summary of findings)</li><li>○ A SRC folder</li><li>○ A DATA folder</li><li>○ A FIGURES folder</li></ul></li></ul>
README.md	<ul style="list-style-type: none"><li>• Goal: This file serves as an orientation to everyone who comes to your repository, it should enable them to get their bearings.</li><li>• Use markdown headers to divide content</li><li>• Make an H2 (##) section explaining the contents of the repository</li><li>• ANALYSIS section<ul style="list-style-type: none"><li>○ Include a summary of your analysis plan and findings.</li></ul></li></ul>

	<ul style="list-style-type: none"> <li>• SRC section <ul style="list-style-type: none"> <li>○ Make an H3 section for Installing/Building your code</li> <li>○ Make an H3 section for Usage of your code</li> </ul> </li> <li>• DATA section <ul style="list-style-type: none"> <li>○ (This one is tricky. Your data may (or not) fit in repo)</li> <li>○ Data Dictionary (use markdown table formatting)</li> <li>○ Data Files or Link to data if it doesn't fit on github</li> <li>○ Relevant notes about use of data</li> </ul> </li> <li>• FIGURES section <ul style="list-style-type: none"> <li>○ This will be in progress when MI3 is complete and finished during MI4</li> <li>○ Table of contents describing all figures produced and summarizing their takeaways</li> <li>○ Use markdown table formatting</li> </ul> </li> <li>• REFERENCES section <ul style="list-style-type: none"> <li>○ All references should be listed at the end of the Readme.md file (Use IEEE Documentation style (<a href="#">link</a>))</li> <li>○ Include any acknowledgements</li> </ul> </li> <li>• Include (by link) your MI1 and MI2 assignments</li> </ul>
LICENSE.md	<ul style="list-style-type: none"> <li>• Goal: This file explains to a visitor the terms under which they may use and cite your repository.</li> <li>• Select an appropriate license from the GitHub options list on repository creation.</li> <li>• Usually, the MIT license is appropriate.</li> </ul>
SRC folder	<ul style="list-style-type: none"> <li>• Goal: This folder contains all the source code for your project.</li> <li>• Include all code files you produce</li> <li>• The high-level documentation for this code lives in the main level README.md file.</li> <li>• Include supplemental documentation as necessary, especially if it is too detailed/verbose for the overall readme.</li> </ul>
Analysis Document	<ul style="list-style-type: none"> <li>• Goal: be able to provide quantitative metrics that describe the current state of the data</li> <li>• Include a graphic that illustrates your analysis plan</li> <li>• Include in your findings measures such as correlation among CPI, S&amp;P 500, and VGT as well as <math>R^2</math> from various linear regressions, or any other appropriate metrics</li> <li>• Write at least 1 paragraph drawing conclusions from the metrics listed above</li> <li>• Maximum: 1 page, PDF Format</li> </ul>
Presentation Slides	<ul style="list-style-type: none"> <li>• About 7 slides</li> <li>• PDF format for submission to collab</li> <li>• Order <ul style="list-style-type: none"> <li>○ Title &amp; Outline</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>○ Motivation/Context/Hypothesis/Research Question/Modeling Approach/Goal/Etc.</li> <li>○ Data Explanation/Acquisition</li> <li>○ Analysis Plan and Justification</li> <li>○ Tricky Analysis Decision o Bias and Uncertainty Validation</li> <li>○ Results/Conclusions</li> <li>○ Next Steps</li> <li>○ References/Resources/Acknowledgements</li> <li>○ Closing Slide</li> </ul>
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Acknowledgements: Special thanks Professor Alonzi for providing the format of this rubric. This structure is pulled direction from [Streifer & Palmer \(2020\)](#).