COMPSS 224B: Quantitative Political Risk
Final Research Design

Objective: Students have already outlined a political risk use case, identified relevant dataset, and preregistered a hypothesis. The objective of this assignment is to continue developing the political risk use case with some preliminary EDA, modeling, and analysis that could turn into an actionable insight for clients.

This is a plausibility probe, not a polished academic paper. We're not expecting robustness checks, hyperparameter tuning, or perfect causal identification. We are expecting thoughtful analysis that shows you understand your data, know its weaknesses/strengths, and can derive meaningful analytics from what you've created.

Deadline: 11:59pm May 16 (submit via Canvas)

Instructions: Submit your code and a write-up to Canvas by 11:59pm May 16 which addresses the following components:

- **Abstract:** "This is a story about…"
- **Relevant Background**: Expand on your political risk use case. Provide some statistics quantifying the impact of this problem and why your targeted client cannot currently monitor or manage this risk.
- **Exploratory Data Analysis:** Describe any relevant data wrangling, preprocessing, or cleaning steps. Present any relevant summary statistics or exploratory data analysis.
- **Prototype Index or Model:** Use either an unsupervised ML method to create an index/dashboard or a supervised ML method to model this risk. Describe methodology, evaluate the index/model's performance, and present results using at least one visualization (e.g. time series plot, map, heatmap).
- **Risk Analysis:** Discuss your results commenting on specific cases, policy events, or incidents where applicable.
    - Was your pre-registered hypothesis correct? What are the important (predictive) takeaways from your prototype?
    - What are some social science assumptions in your research design? How plausible are these assumptions and what could change them?
    - What are the main market and/or commercial implications of this finding?
    - How might a client use your results to better monitor or manage this political risk in the future? What are 1-2 actions they can take with these political risk insights?
- **Product Development Next Steps:** Explain gaps or limits to your existing approach and what you might change. If using an unsupervised method - how might you improve the index sensitivity? If using a supervised method, how could you improve on the model performance?

Format

Attach a csv of the processed dataset you use and a .py or .ipynb with your code.

Up to 3000 words

Use headings (and subheadings if necessary) to organize your paper into distinct sections.

Times New Roman, 12 pt font, 1" margins. Citation style doesn't matter as long as you are consistent (e.g. footnotes, end notes, or in-line citations.)