# Climate Change Analysis RUBRIC

### **Required Experience and Materials:**

- Lessons and coding walk-throughs delivered in class about various ML models
- Downloaded packages to R for your project (\*this will vary depending on which model you choose, but you will most likely use AT LEAST tidyverse, dplyr, and ggplot2)
- Critical thinking skills and a positive attitude (you all are bright UVA students so I know this will not be an issue  $\bigcirc$ )

### Goals of the project:

This project is not only assigned to help you practice your skills learned in class, but also gain a simulated experience of real-world decisions data scientists must make. You are encouraged to use creativity in your country choices, variable choices, analysis plan, and visualizations. Pretend you are working for a real environmental agency; how can you best communicate your project to people who may not understand data science?

#### **Learning Objectives:**

- Successful deployment of a machine learning model
- Creativity- exercising agency in your decision-making process
- Communication- formatting your project in a clear and legible manner

**Remember:** This project is supposed to be FUN and a learning experience to prepare you for the real world. You do not have to take yourself too seriously. While this project is an individual assignment, feel free to consult your peers for advice and stop by my office during office hours or make an appointment. My door is always open for students!

## **Requirements:**

| Spec Category | Spec Details   |
|---------------|--|
| Formatting    | Github Repository with:  • README.md  • License  • .rmd code file  • visualizations  *Excluding the license, ensure each file has your name, date, and the class name  |
| README.md     | The README.md file should contain the context of your case and explain your goals  • A short summary description of your project and the goals (2-4 sentences)  • A paragraph explaining your countries of choice (besides US and China)  • A paragraph explaining which |

|                | variables you chose and why (variables must be TOTAL, not per capita)  • Your analysis plan and chosen machine learning model   |
|----------------|---|
| License        | MIT License for conditions of sharing and using your work   |
| .rmd File      | <ul> <li>Your .rmd file must include:         <ul> <li>Code showing how you cleaned your data</li> </ul> </li> <li>The successful deployment of your machine learning model and its results</li> <li>The creation and deployment of AT LEAST one graph visualizing your results</li> <li>Annotation to your code explaining your steps</li> </ul> |
| Visualizations | PDF file with all visualizations included in your project, including descriptions for each one  • Make sure all axes are labeled and each graph is titled  • Feel free to explore visualization options with different colors, shapes, and graph styles! Have fun with it!  |

Acknowledgements: Thank you to Dr. Alonzi for permission to use this rubric format. This structure is pulled directly from Streifer & Palmer (2020).