**Individual Final Project**

**(Due on Monday, May 15, 2023, by 11:59 pm ET – 100 points)**

This is a project where you can use all the skills you have learned in this class as well as those which you have acquired otherwise. The dataset can be obtained from <https://data.baltimorecity.gov/datasets/surface-water-quality-data-1995-through-present/about>

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| This dataset represents Surface water quality from 1995 through present year in the City of Baltimore. It represents the monitoring for the water quality of the streams and Harbor in the City of Baltimore. The Environmental Compliance and Laboratory Services Division of the Bureau of Water and Wastewater is responsible for monitoring the quality of the streams and Harbor in the City of Baltimore. The purpose of this program is to evaluate the quality of our surface waters for any long-term trends and determine any capital investment programs or operational programs to implement. The results may be affected by a variety of factors: precipitation, land use changes, and human behavior. For more information: <http://cleanwaterbaltimore.org/>  There are several tasks for you to take in this project. The final deliverable should be a markdown file like what I provide as class Python notebooks. It should contain **detailed** written assumptions, summary, analytical insights, and visualizations. This is where you can be creative. Clean the data as needed and perform exploratory data analysis (EDA). If you want to incorporate a Tableau dashboard, you can add that in the end as well. |

Perform the required analysis using Python, provide written insights and visualizations. Remember to provide adequate code comments.

The Python notebook and PDF should be submitted for grading. The files should be named as: Lastname\_Firstname\_FinalProject.pdf **and** Lastname\_Firstname\_FinalProject.ipynb

**NOTE: Submissions via email will NOT be accepted for this Final Project. Therefore, make sure that you submit ahead of cutoff time.**