

Assignment 1 – GGS590 Spatial Computing

Due September 15th 2024

Please find the 5 assignment questions enclosed, totaling 100 available points.

Remember, if you just rely on genAI, you will not learn the fundamental basics, and thus fail the graded closed-book test/exam planned for later in the semester. So, the important thing here is to really make a good attempt at solving these problems without any assistive tools, based on the materials you have learnt in the first few weeks of the class.

To submit the work, you need to write your answers in a colab .ipynb notebook and then:

1. Print the .ipynb notebook to a .pdf and submit for review on blackboard.
2. Submit also the actual .ipynb notebook on blackboard allowing your code to be easily run.

Without submitting both of these files like this, you will receive a 50-point penalty to your overall grade.

Submitted work may be checked for plagiarism, including for GenAI usage. The Mason honor code applies.

1. Concatenate four variables into a string, where each variable is a string, float, integer and Boolean. Separate using underscores (20 points).
2. Write a function which accepts an integer, divides the value by four, and then returns the squared product (20 points).
3. Write a function which accepts a float and an integer, cubes both provided values, and returns the summation (20 points).
4. Write a function which accepts a single argument, checks the type to separate out numeric and text values (20 points).
5. Ensure all functions comply with PEP8 and PEP 257, with docstrings which fulfil the numpy docstring style. Write a description of how these functions comply, and why this is important (20 points).