

NUMERICAL ANALYSIS: HOMEWORK 6

Instructor: Anil Damle

Due: May 7, 2024

POLICIES

You may discuss the homework problems freely with other students, but please refrain from looking at their code or writeups (or sharing your own). Ultimately, you must implement your own code and write up your own solution to be turned in. Your solution, including plots and requested output from your code should be typeset and submitted via the Gradescope as a pdf file. This file must be self contained for grading. Additionally, please submit any code written for the assignment as zip file to the separate Gradescope assignment for code.

The purpose of this HW is to provide an avenue for you to synthesize what you have learned over the course of this class. (As a complete aside, this nicely fits into Bloom's taxonomy.) This is a bit of an experiment, and will be graded as such. We are looking for viability of the question and correctness of your solution, and will not be so concerned with an assessment of if they are good questions. These questions will not be directly used on the final exam (barring some sort of unexpected event in which you happen to independently write a question we already plan to use on the final).

QUESTION 1:

Write a viable homework question for this course (it may pertain to anything we have covered). Your question may be of a theoretical or computational nature (or blend the two). In addition, write a solution (including code, if relevant) for your problem.