Neel Sanghvi – Lab 11

Link to Github: [NeelSanghvi/APPM-4600 (github.com)](https://github.com/NeelSanghvi/APPM-4600)

All the adaptive models have a error less than 1E-3 with only 3 nodes. And when the number of nodes are 5

The composite trapezoid model needed 7 intervals.

The composite simpsons model needed 6 intervals.

The guassian quadrature needed 5 intervals.

The non-adaptive gaussian quadrature decreases the order of relative error linearly with increasing n and it takes 17 nodes to reach absolute error less than 1E-3

The non-adaptive composite trapezoid quadrature does not reach an error tolerance of < 1E-3.

The non-adaptive composite Simpsons also does not each an error tolerance < 1E-3.

All plots and codes are uploaded to the Github