4511W, Spring-2019
WRITING ASSIGNMENT 2 :
Assigned: 2/25/19 Due: 3/10/19 at 11:55 PM (submit via Canvas) Submit only pdf files.

Written

For this written assignment, we will look at the N-Queens problem and investigate how the genetic algorithm performs. There is a built-in genetic search that you may use with the code you downloaded for homework 2 (in the same file as the other searches). For all of this assignment, disable f_thresh (and don't use it as a parameter).
(Note: running the genetic algorithm might take some time on your/the computer, so it might not be a good idea to gather the data last-minute.)

For this writing assignment, you need to have both a table and a figure (written in LaTeX, like the sample shown) in addition to an analysis for each. The file "writing2sample.tex" shows how to create tables and figures in LaTeX (or you could google).

The figure should compare the quality of results (y-axis) of the genetic algorithm for different size N-Queens problems (x-axis). In addition, you should change one additional parameter of your choice to create multiple line across these different size problems like the figure shown below.
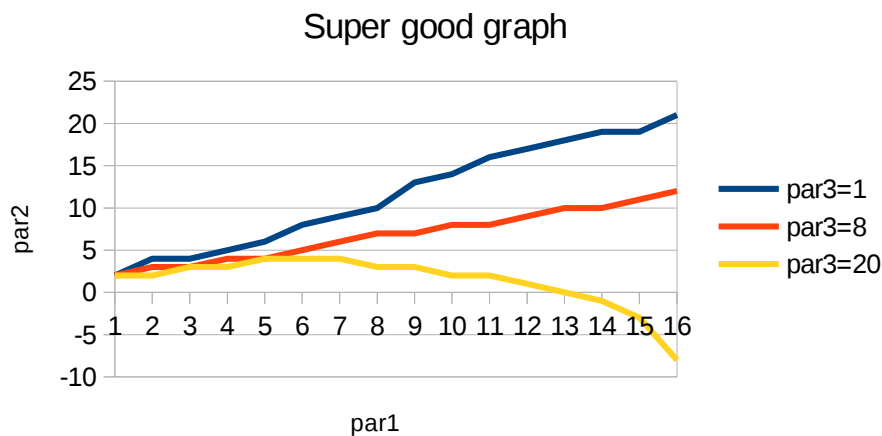
The table must compare the run-times while varying two parameters of your choice simultaneously for a size 16x16 board (n=16). (One of your parameters cannot be problem size as that is fixed.)

For both the figure and table, you must write an analysis of your results. This should include a brief summary. How you analyze the data is up to you. For example, you could try to generalize the trends of the data or explain why the data makes sense from the way the algorithm works.

Grading:

Latex 20%
Figure 20%
        -Data presentation 10%
        -Meets requirements 10%

Table 20%
      -Data presentation 10%
      -Meets requirements 10%
Analysis 40%
      -Figure analysis content 10%
      -Figure analysis clarity 10%
      -Table analysis content 10%
      -Table analysis clarity 10%