

4511W, Fall-2018

WRITING ASSIGNMENT 2 :

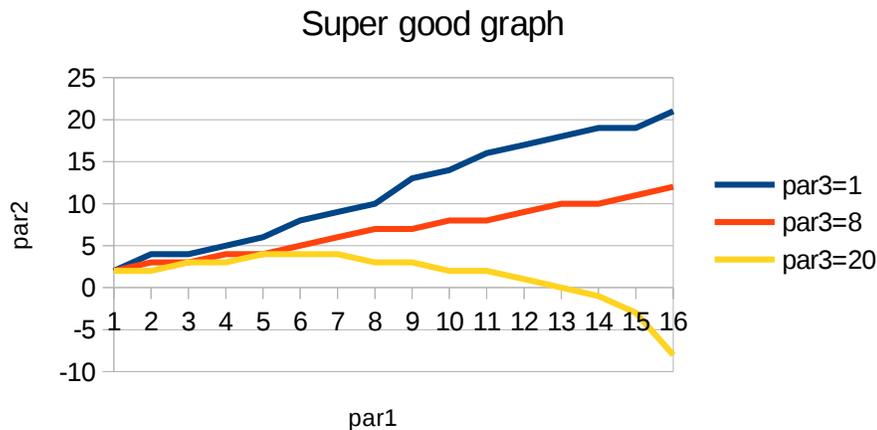
**Assigned: 10/10/18 Due: 10/17/18 at 11:00 PM** (submit via moodle) Submit only pdf files.

### Written

For this written assignment, we will extend problem 5 of homework 2. Again we will look at the N-Queens problem and further investigate how the genetic algorithm performs. For all of this assignment, disable `f_thresh` (and don't use it as a parameter).

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 (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 20x20 board ( $n=20$ ). (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%