

Math 350, Spring 2021, Neural Gas Homework

For the homework on the Neural Gas algorithm, upload the six files (app1.m, app2.m, app3.m, NeuralGasNetwork.m, NGData.mat, and PlotResults.m), and try to get app2.m and app3.m to run on Octave-online (or Octave at home). Unfortunately, we won't have a Python version of the Neural Gas algorithm ready (there are growing neural gas algorithms available, but the plotting routines are terrible).

For the third problem, we'll be clustering the obstacle course data as described in the course notes. In this case, there is a data file available for upload, obstacle1.mat. If you load it into Octave, you'll have a matrix A that is 1000×2 . To actually run the algorithm, I would suggest starting with app1.m and then edit it to match what you want to do here.

When you're finished, upload copies of the script files you used (three of them), together with the final pictures of each clustering (either by exporting the files directly or by screenshot).

Our goal is to get a "good" clustering, which for now is something that looks right visually.

Due: Monday, Mar 29