Polished code assignment

Due Friday June 7, 2019 by 11:59pm

In this assignment that will count towards your class participation, you are going to choose one statistical machine learning method covered during the class, code it or re-use the codes your wrote for a homework, polish it, and submit it on Canvas.

You may choose any method mentioned during the course and studied in the homeworks. You may also use the homework solutions and labs to improve your codes. However you may not copy-paste the codes from the homework solutions nor the labs. The codes must be written in Python.

The code you submit must include:

- a demo file, that allows a user to launch the method on a simple simulated dataset, visualize the training process, and print the performance
- a demo file, that allows a user to launch the method on a real-world dataset of your choice, visualize the training process, and print the performance
- a file allowing a user to run an experimental comparison between your implementation and scikit-learn's on either a simulated or real-world dataset
- commented codes, broken down into appropriate functions
- A readme file briefly mentioning the method you coded and informing a potential user of things they might need to know to run your code (e.g., where to download the necessary data from to run your examples).

Please submit the files separately on Canvas; don't upload them as a zip file.
The real-world dataset must come from one of the following sources:

- `http://www-bcf.usc.edu/~gareth/ISL/index.html`
- `https://statweb.stanford.edu/~tibs/ElemStatLearn/`
- example datasets used by scikit-learn
- datasets used in the labs
- data competition project dataset

Your code should be well-documented and commented, and it should work!