Project requirements

Your project should include the following:

Part 1 – your project objective and data : (10pts)

1. Set your goal(s) in a paragraph and state why you chose this project and what you are trying to solve
2. Load your data from an external source (.xls, .txt, .mat, image, audio file) into the workspace for any kind of analysis, recognition, mathematical operation or filtering you intent to perform

Part 2 – demonstrate understanding of TensorFlow's key objects, graphs, nodes, etc: (20pts)

1. You can use NumPy objects that can be used as tensors in the process
2. Use typecasting if and whenever necessary

Part 3 – use any of the learning methods and algorithms we discussed in class: (30pts)

1. You can use any of the following machine learning methods without any limitations:
   k-Means, Linear regression, Logistic regression, Neural Networks, or any other Supervised or Unsupervised learning method needed in case
2. Since sophisticated modeling usually requires the execution of calculations on datasets in repetitive fashion, in addition to functions and classes consider using modules that you build in a small package

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Part 4 – plotting some of your results: (30pts)

1. make the best use of what we have covered: use 2-D or 3-D plots whenever necessary
2. Use Tensorboard to describe your graphs
3. Consider using graph summaries in different parts of the process as shown in class
4. make sure that at minimum you use: titles, x- and y- labeling, x- and y- ticks
5. when possible, use legends and annotations

Part 5 – clean up your code: (10pts)

1. Use good coding practices (avoid cryptic expressions, use comments and sections, load only what you need, etc.)
2. Save your project to a .py file and email it to me along with your data source before the beginning of presentation day. Your project may need to include different modules that you wrote. In this case provide the entire package.
3. Presentations will take place in our last class, so get ready to discuss your results.
   Keep in mind you only have 10-12min to present your case to the class so be concise. The floor will be open for questions. The order of presenting will be chosen randomly before we begin.
4. Include the following in a README.txt file and send it to me:
   - what platform/system and installation versions you used to run your code
   - what packages, dependencies and versions you used
   - the sequence of how your code needs to be executed
   - any other details that you think might be useful

   Please come on time!