
Project Guidelines

COSC425, Fall 2020

I. General Guidelines

1. The “Project Workflow” document outlines a suggested workflow for all of your machine learning projects. Use it!
2. Projects must be implemented in *Python 3.7*. Download it by clicking [here](#).
3. You cannot use Machine Learning libraries (e.g., sklearn, PyTorch, Tensorflow).
 - You are not expected to implement *everything*. You can use libraries that help you with matrix manipulations (e.g. multiplication, transposition, etc), plotting (e.g. matplotlib, Seaborn), and data wrangling (e.g. Pandas). **When in doubt, ask!**
4. Canvas is encouraged for sharing resources (e.g. StackOverflow links) and having discussions around challenging questions. The only constraint is not sharing answers/code.

II. Grading Rubric Your assignment submission should include two components: (1) the implementation of your algorithm and (2) a final report. Your final report should describe your observations about the data, any manipulation or standardization that you applied to the data, and the results of your ML experiments. You will be graded on the quality of your report, so make sure it is well organized and well written.

Credit will be assigned as follows:

- Project Description (10)
 - { (5) Describe the purpose of the project.
 - { (5) Describe your data that you’re examining.
- Pre-Processing Steps (10)
 - { (10) Explain the format of the initial data. Explain how you’ve manipulated the data, including adjusting missing values, separating training and test data, etc.
- Solution Description (20)
 - { (10) Detail the technical implementation (e.g., language, parameters, etc.).
 - { (10) Describe equations in your learning method. Describe the equation’s variables.
- Evaluation and Analysis (50)
 - { (25) Provide results in a legible format (e.g. graphical plots, tables, clear writing).
 - { (25) Explain your results (e.g., accuracy) in as much detail as possible.
- Discussion (10)
 - { (10) Provide a summarization of your results.

III. Project Submission

Your project should be submitted by zipping a folder containing (1) your software implementation and (2) your final report in PDF format. The ZIP file should be uploaded to Canvas before the time of the project’s due date.
