Project 4 – Predicting Wine Quality

Due Date: Tuesday, April 30 at 11:59 PM

Description:

In this project, you will use AWS SageMaker to develop an ML based wine classifier based on a dataset. The wine classifier should classify the wine as:

- Low Quality - if quality is 0 - 4
- Average Quality - if quality is 5 - 7
- High Quality – if quality is 8 - 10

Dataset

https://archive.ics.uci.edu/dataset/186/wine+quality

- Use the white wine data only for this project

Requirements

- You have to implement the classifier using **at least 2 different models**.
- You have to give the accuracy, precision, and recall of each of your models.
- You have to define appropriate IAM policies and roles whenever necessary.
- You should not include any access key information directly in your code.
- You are free to use any programming language to implement this project.
- Use 80/10/10 rule for training/testing/validation

Restriction

You **MUST** follow the following rules strictly. **Failure to follow the rules will result in some points deductions from your grade**.

- Name your resources as `p4-[yourName]`.
- DO NOT create a new VPC and Subnet. Use the default ones. There is no need of Elastic IP for this project.

Submission:

- Submission is via Canvas.

- A zip folder that contains:
    - Your code
    - A PDF file that contains
        - The name of the two models you used and the Accuracy, Precision, and Recall of the two models
        - The name of the bucket (S3) that contains the output folder and the output file.

AWS

- The output folder (name the folder p4-[yourname]) that contains the classification results. One for each model.
- The output file that contains the performance metrices in a descriptive manner. The file should contain the metrices for both models. Note this is a single file.

Note:

- Please try your solution locally first before asking for the autorization authorization to use SageMaker and other services on AWS.
- You are going to depend on the AWS documentation for this project and we recommend you to start working on the project early.