Exercise: XGBoost

Using Sagemaker Studio, we'll be exploring XGBoost and leveraging it on the same regression and classification problem as `Exercise: Linear Models`. This is useful as when are you faced with a new challenge, you often try many different models to see how they each perform on your problem space. XGBoost can be tuned in many different ways, so we'll stick with some of the simpler defaults.

You're tasked with completing the following steps:

1. Load in the wine dataset from scikit learn.
2. For the wine dataset, create a train and test split, 80% train / 20% test.
3. Load the train/test data into the xgboost matrix
4. Create a XGBoost Classifier model with these hyperparameters:

```
max_depth: 5
eta: 0.1
objective: multi:softmax
num_class: 3
num_round: 100
```

5. Evaluate the model with the test dataset
6. Load the diabetes dataset from scikit learn
7. For the Diabetes dataset, create a train and test split, 80% train / 20% test.
8. Load the train/test data into the xgboost matrix
9. Create a XGBoost Regression model model with these hyperparameters:
10. Evaluate the model with the test dataset

Use the `Python 3 (Data Science)` kernel when using the starter Jupyter notebook for this exercise. The starter Jupyter notebook should be part of the course git repository in `Lesson 4/Exercise 2` - `02_exercise_starter.ipynb`.

Exercise: XGBoost Checklist