Reading & Discussion: Chapter 5 - Scikit Learn (Pages 342-359)

TASK

Your task for this discussion is to read [Chapter 5Links to an external site.](https://jakevdp.github.io/PythonDataScienceHandbook/05.02-introducing-scikit-learn.html) - Machine Learning (Scikit Learn Pages 342-359). This can be found in the link provided or the [pdf version of the textbook](https://elearning.mines.edu/courses/52392/files/5459013/download?wrap=1)[Download pdf version of the textbook](https://elearning.mines.edu/courses/52392/files/5459013/download?download_frd=1)for the class that we have provided. You will then post a discussion and a reply below!

DISCUSSION REQUIREMENTS

Once you have completed this weeks reading, you are asked to complete the following tasks:

1. Post a 1-2 sentence response from the reading for 2 of the three below prompts:

a. Define a features matrix, what is the use for a feature matrix?

b. What is the use of the target or label array?

c. Provide a free-response: this can be anything from clarification questions, something that piqued your interest, or maybe a personal experience you have with what was discussed in the book section.

2. Post a meaningful reply to another student's question/post.

# **Instructional Videos & Learning Materials: Scikit Learn**

## WATCH

Watch this week's video, download the working files so you can follow along and experiment with the platform we'll be using for the course.

**Scikit Learn Basics Video**

WORKING FILES

You will need the following files to get set up for this week. They include the following:

* Here is a visualization of Scikit Learn, this is a useful tool for understanding Scikit Learn and can be found [hereLinks to an external site.](https://scikit-learn.org/stable/tutorial/machine_learning_map/index.html" \t "_blank).
* Jupyterhub notebook (download to a personal device then upload to your Jupyterhub). Also, download the image and place it in the same directory in your Jupyterhub notebook.
  + [Scikit Learn Lecture](https://elearning.mines.edu/courses/52392/files/5459124/download?wrap=1)[Download Scikit Learn Lecture](https://elearning.mines.edu/courses/52392/files/5459124/download?download_frd=1)
  + [Supporting Image](https://elearning.mines.edu/courses/52392/files/5459125/download?wrap=1)[Download Supporting Image](https://elearning.mines.edu/courses/52392/files/5459125/download?download_frd=1)
* PDF files that contain the same information as the Jupyterhub notebooks, in case your Juypterhub is not yet working.
  + [Scikit Learn PDF](https://elearning.mines.edu/courses/52392/files/5459176/download?wrap=1)[Download Scikit Learn PDF](https://elearning.mines.edu/courses/52392/files/5459176/download?download_frd=1)

ADDITIONAL RESOURCES

The links below are supplementary resources to help you review or strengthen the topics we have discussed:

* [SciKit-learn Linear Regression exampleLinks to an external site.](https://www.kaggle.com/andyxie/beginner-scikit-learn-linear-regression-tutorial)
* [Train, Test Split in SciKit-learnLinks to an external site.](https://scikit-learn.org/stable/modules/generated/sklearn.model_selection.train_test_split.html)
* [OLS Regression in SciKit-learn (1.1.1)Links to an external site.](https://scikit-learn.org/stable/modules/linear_model.html#ordinary-least-squares)