Module 2 | Overview

OVERVIEW

This module, we study the different types of and uses for the visualization of data. We will compare and practice with popular techniques that will enable us to quickly understand complex patterns in data and conduct data exploration. We also introduce the basics of Machine Learning and practice by exploring an application of linear regression.

LEARNING OUTCOMES

This module will support these course level learning outcome:

* Apply statistical and machine learning toolkits to large datasets, including applications of  
  regression, classification, and clustering.
* Perform simple visualizations of data.

ASSIGNMENTS

This is an approximation of the amount of time each activity will take the average student. If you find you are taking more time than suggested, please contact me for help.

| ASSIGNMENT ORGANIZER | |
| --- | --- |
| **Activity** | **Time (Hrs)** |
| Study/Reflect Time | 1:00 |
| Participate in [Reading & Coding: Matplotlib](https://elearning.mines.edu/courses/52392/discussion_topics/256391) | 1:00 |
| Watch & Study [Instructional Videos & Materials: Python Visualization](https://elearning.mines.edu/courses/52392/pages/instructional-videos-and-materials-python-visualization) | 1:00 |
| Submit [Activity: Visualization - Selecting a Graph](https://elearning.mines.edu/courses/52392/quizzes/74261) | 0:30 |
| Participate in [Reading & Discussion: Chapter 5 - Machine Learning (Intro Pages 331-342)](https://elearning.mines.edu/courses/52392/discussion_topics/256392) | 1:00 |
| Watch & Study [Instructional Videos & Materials: Intro to Machine Learning](https://elearning.mines.edu/courses/52392/pages/instructional-videos-and-materials-intro-to-machine-learning) | 1:00 |
| Submit [Activity: Introduction to ML Quiz](https://elearning.mines.edu/courses/52392/assignments/354704) | 0:30 |
| Submit [Project 2: Visualization](https://elearning.mines.edu/courses/52392/assignments/354742) | 5:00 |
| Submit [Project 3: Fitting](https://elearning.mines.edu/courses/52392/assignments/354743) | 5:00 |
| **Total Hours:** | **16:00** |