**Goals of the course:**

* Gain an understanding of machine leanring topics, uses, and algorithms
* Build a library of analysis scripts that implement machine learning techniques
* Become familiar with the best practices for the implementation machine learning techniques

**Main course text:** Python Machine Learning by Sebastian Raschka (PDF available on Slack)

**Course Structure:**

* Begin by following Python Machine Learning as an introduction to ML topics
* Weekly meetings to present chapters, work through problems, and pose questions

**Weekly Meetings:**

* Tentatively Wednesdays from 9:30-11:30 in the Graduate Student Lounge of Memorial Library
* First meeting will be Wednesday June 6th
* We will use Zoom to video conference for those people connecting remotely
* Typical meeting plan:
  + Begin with a discussion of the previous week’s take-home questions
  + Two people chosen the previous week will each present a chapter from Python Machine Learning
  + We will collectively work on a problem relevant to each chapter presented
  + The person presenting the chapter will assign a take-home problem that people should try to solve independently and discuss solutions at the next meeting

**Expectations:**

* Read chapters prior to each meeting
* No assignments are ever required, and you only have to present if you choose to sign up. The course is designed so that you can put in as much work as you want
* Tell someone if you think their code can be improved in any way as we are all trying to develop good coding practices
* Be open to critiques of your codes

**Schedule:**

Prior to first meeting:

1. Alex will be setting up a Dropbox and a GitHub repository to make sharing files and version control easy. Connect to these when possible to make sure they are set up.
2. Rob will be sending out a link to get started using Zoom for video conferencing for anyone who hasn’t used it before
3. Have Anaconda installed on your computer so that you will be able to use Python, Pandas, NumPy, SciPy, SK-Learn, and Jupyter

**Wednesday June 6**

* We will address any installation or connection issues that people might be having
* Rob will present chapters 1 and 2
* We will work collectively on a problem
* Rob will come up with a take-home problem

**Wednesday June 13**

* Discuss different solutions to the take-home problem from the previous meeting
* Alex will present chapter 3
* Greg will present chapter 4
* We will work collectively on 1-2 problems chosen by Alex and Greg
* Alex and Greg will come up with 1-2 take-home problems

**Wednesday June 20**

* TBD