Statistics and Data Science 265

Introductory Machine Learning

Tuesday, September 6

Yale

Outline

- Administrative items
- Elements of Python
- Demo

Office Hours

Instructor:

John Lafferty: Tue 2:00 pm - 3:00 pm

TFs:

Zhehao Xu: Tue 10:30 am - 11:30 am

Hannah Wang: Wed 6:00 pm - 7:00 pm (17 Hillhouse Room 05, and Zoom)

Wendy Luo: Wed 8:00 pm - 9:00 pm (Zoom)

ULA:

Jacob Alvarado: Mon 4:00 pm - 5:00 pm

Teckhua Chiang: Tue 9:00 pm - 10:00 pm

Kaitlin Flores: Wed 7:00 pm - 8:00 pm

Lucas Zheng: Fri 11:00 am - 12:00 pm

Alice Geng: Sun 2:00 pm - 3:00 pm

Upcoming

- Quiz 1 this Thursday, Sept 8
- Similar to "self assessment questions"
- Posted to Canvas after lecture
- Available for 48 hours; 20 minutes once started
- Assignment 1 posted Thursday, September 15
- Topics: Classification and regression

Recap

- Last time: Course overview, logistics
- Any questions?

For today

- Overview of important aspects of Python
- Learn by using it!
- Thursday: Further examples, start on regression

Concepts

- Python types: lists, tuples, strings, dictionaries
- Basics of iteration
- Comprehensions
- Arithmetic
- Printing
- NumPy and multi-dimensional arrays
- Array math
- DataFrames and pandas
- Matplotlib and basic plotting

Resources

- Anaconda Python: https://www.continuum.io

- Jupyter notebooks: jupyter-notebook.readthedocs.io

- PyCharm debugger: www.jetbrains.com

- *Introducing Python*, Bill Lubanovic, O'Reilly

- *Python in a Nutshell*, Alex Martelli et al., O'Reilly

- *Python Cookbook*, David Beazley, Brian K. Jones, O'Reilly

- Google's Python class:
  https://www.youtube.com/watch?v=tKTZoB2Vjukxo

- https://docs.python.org/3.5/tutorial

- *Lots* of other materials available on the web