Statistics and Data Science 265

Introductory Machine Learning

Tuesday, September 7

Yale

Outline

- Administrative items
- Elements of Python
- Demo

Office Hours

Current office hours

- Chris Xu: Monday 1pm (this week: Tues)
- John Lafferty: Tuesday 3pm
- Yiyang Wang: Wednesday 7pm
- Wendy Luo: Thursday 7pm

For now, OH will be held by Zoom. Link is available on Canvas

OH for the ULAs will be posted soon

Upcoming

- Quiz 0 this Thursday, Sept 9
- Similar to "self assessment questions"
- Available on Canvas after lecture
- Assignment 1 posted Tuesday, September 14
- 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