



Course Title: Machine Learning with python

Course Code: CS 08

Instructor: Michael Galarnyk

Course Summary:

Key Topics:

- * Python Review
- * Data Manipulation with Pandas
- * How to Visualize Data with Matplotlib
- * What is Machine Learning
- * How to use Machine Learning Algorithms with Python
- * The strengths and weaknesses of different machine learning algorithms
- * What is deep learning
- * Common uses of deep learning

Grade Options and Requirements:

- No Grade Requested (NGR)
 - This is the default option. No work will be required; no credit shall be received; no proof of attendance can be provided.
- Credit/No Credit (CR/NC)
 - Students must attempt every quiz in the course.
- Letter Grade (A, B, C, D, No Pass)
 - Students must attempt every quiz in the course (open book/open notes/unlimited attempts)

**Please Note: If you require proof that you completed a Continuing Studies course for any reason (for example, employer reimbursement), you must choose either the Letter Grade or Credit/No Credit option. Courses taken for NGR will not appear on official transcripts or grade reports.*

Tentative Zoom Schedule*:

**Please note that the Zoom schedule is subject to change.*

Please contact the Stanford Continuing Studies office with any questions
365 Lasuen St., Stanford, CA 94305
continuingstudies@stanford.edu
650-725-2650

Zoom meetings are set for Monday nights at 6pm pacific standard time. While the instructor will set the topics for the zoom meeting, students are more than welcome to email with questions before the lecture.

Tentative Weekly Outline:

Week 1: Data Manipulation with Pandas and Python Basics Review

Pandas quiz

Week 2: Data Visualization with Matplotlib

Matplotlib and Seaborn Quiz

Week 3: Introduction to Machine Learning with Scikit-Learn

Scikit-Learn Quiz

Week 4: Decision Trees

Bias and Variance Quiz

Decision Trees Quiz

Week 5: Logistic Regression

Logistic Regression Quiz

Week 6: Clustering

Clustering Quiz

Week 7: Dimensionality Reduction

Dimensionality Reduction Quiz

Week 8: Random Forests and Gradient Boosting Machines

Random Forest Quiz

Week 9: Topics of Interest

Other topics we didn't cover in this course.

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Week 10: Introduction to Deep Learning

Deep Learning Quiz

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