Course Syllabus

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NOTE: Some links in this syllabus page may only be accessible to currently enrolled students.

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Instructor Introduction

Hi everyone! My name is Yong Bakos, and I am your Instructor this term for CS 513 Applied Machine Learning.

CS 513 Instructor Introduction

Yong Bakos

03:18

This course was originally developed by Yong Bakos. Our goal is to teach graduate students pursuing a masters in data science and statistics about the vocabulary, concepts, algorithms, applications, tools and code that machine learning practitioners use. This is a technical course, but it is not a "hard core" programming course. Because machine learning is a broad, deep and rapidly-changing field, no single course will enable one to be a master of machine learning. We have chosen to equip each student with a strong foundation in machine learning, integrating both knowledge and skill-building, to support your future studies. If you do not know anything about machine learning, you are in the right place.

Based on our past experience, the two most important things to do in this course are:

- **Ask lots (lots!) of questions** using the communication tools of the course
- **Schedule dedicated focus time** to start the module content and assignments early

Remember, *online does not mean alone*. One component of value in this course is engaging with other people learning the same thing at the same time and having an instructor to help guide that learning. If you are not active on the Ed discussion board you will get much less out of the course. Students who engage with each

other, the content and the teaching staff tend to do better in the course and have a more positive experience than those who don't.

We are looking forward to working with you and supporting your success in this course!

Instructor: Yong Bakos

(https://canvas.oregonstate.edu/courses/2025514/modules)

Course Summary:

Date	Details	Due
Sun Apr 6, 2025	Notebook 1: Introduction to Jupyter Notebooks (w1) (https://canvas.oregonstate.edu/courses/2025514/assignments/10065698)	due by 11:59pm
	Quiz 1: Machine Learning Concepts & Vocabulary (w1) (https://canvas.oregonstate.edu/courses/2025514/assignments/10065688)	due by 11:59pm
	Quiz: Syllabus and 'Start Here' (https://canvas.oregonstate.edu/courses/2025514/assignments/10065694)	due by 11:59pm
Sun Apr 13, 2025	Quiz 2: Data Types, Preprocessing & Similarity Metrics (w2) (https://canvas.oregonstate.edu/courses/2025514/assignments/10065693)	due by 11:59pm
	Notebook 2: Data Exploration, Preprocessing & Similarity Metrics (w2) (https://canvas.oregonstate.edu/courses/2025514/assignments/10065699)	due by 11:59pm
Sun Apr 20, 2025	Quiz 3: k-Nearest Neighbors (w3) (https://canvas.oregonstate.edu/courses/2025514/assignments/10065686)	due by 11:59pm

Date	Details	Due
	Notebook 3: Classification with k-Nearest Neighbors (w3) (https://canvas.oregonstate.edu/courses/2025514/assignments/10065700)	due by 11:59pm
Sun Apr 27, 2025	Quiz 4: Perceptrons (w4) (https://canvas.oregonstate.edu/courses/2025514/assignments/10065690)	due by 11:59pm
	Notebook 4: Classification with Perceptrons (w4) (https://canvas.oregonstate.edu/courses/2025514/assignments/10065701)	due by 11:59pm
Sun May 4, 2025	Midterm Exam (w5) (https://canvas.oregonstate.edu/courses/2025514/assignments/10065696)	due by 11:59pm
	Quiz 5: Deep Learning (w5) (https://canvas.oregonstate.edu/courses/2025514/assignments/10065695)	due by 11:59pm
Sun May 11, 2025	Quiz 6: Linear Regression & Gradient Descent (w6) (https://canvas.oregonstate.edu/courses/2025514/assignments/10065692)	due by 11:59pm
	Notebook 6: Predicting Housing Prices with Linear Regression (w6) (https://canvas.oregonstate.edu/courses/2025514/assignments/10065702)	due by 11:59pm
Sun May 18, 2025	Quiz 7: Logistic Regression (w7) (https://canvas.oregonstate.edu/courses/2025514/assignments/10065691)	due by 11:59pm
	Notebook 7: Classification with Logistic Regression (w7) (https://canvas.oregonstate.edu/courses/2025514/assignments/10065703)	due by 11:59pm
Sun May 25, 2025	Quiz 8: Support Vector Machines (w8) (https://canvas.oregonstate.edu/courses/2025514/assignments/10065687)	due by 11:59pm
	Notebook 8: Classification with Support Vector Machines (w8) (https://canvas.oregonstate.edu/courses/2025514/assignments/10065704)	due by 11:59pm

Date	Details	Due
Sun Jun 1, 2025	Quiz 9: Text Classification & Sentiment Analysis (w9) (https://canvas.oregonstate.edu/courses/2025514/assignments/10065685)	due by 11:59pm
	Notebook 9: Text Classification & Sentiment Analysis (w9) (https://canvas.oregonstate.edu/courses/2025514/assignments/10065705)	due by 11:59pm
Fri Jun 6, 2025	Quiz 10: Reflection on Machine Learning (w10) (https://canvas.oregonstate.edu/courses/2025514/assignments/10065689)	due by 11:59pm
Thu Jun 12, 2025	Final Exam (w11) (https://canvas.oregonstate.edu/courses/2025514/assignments/10065697)	due by 11:59pm