

Spring 2024 Computer Science 483-04

Introduction to Machine Learning

Course Description: The goal of the course is to introduce students to the basics of Machine Learning.

Course Prerequisites: CPSC 335, MATH 338 or by consent of the instructor

Course Meeting Information:

Room: EC 063
Time: Monday 19:00 – 21:45
Final Exam: 05/13/2024 19:00 – 20:50

Instructor: Tseng-Ching James Shen

Phone: 626-715-2736
Email: jtcshen@fullerton.edu
Office: CS 209
Office Hours: Monday 15:45 - 18:45

Textbook

Required:

1. *A First Course in Machine Learning, 2nd Ed., Rogers and Girolami, Chapman & Hall*
 2. *Python Machine Learning, Sebastian Raschka, PACKT Publishing*
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Course Outline: This outline which might be adjusted accordingly during the semester is given here as a guideline.

1	Overview of Machine Learning
2	Data Pre-Processing (I)
3	Data Pre-Processing (II)
4	Regression Analysis
5	<i>President's Day</i>
6	Classification Algorithms (I)
7	Classification Algorithms (II)
8	Project Proposal Presentation
9	Midterm Exam
10	Model Validation
11	<i>Spring Recess</i>
12	Clustering Algorithms (I)
13	Clustering Algorithms (II)
14	Artificial Neural Networks
15	Project Presentation I
16	Project Presentation II

Grading: Final grade will be given as A+, A, A-, B+, B, B-, C+, C, C- etc. The following table will be used to calculate the final weighted score.

Category	% of Final Grade
Final Project	40%
Midterm	30%
Final	30%

Technical Proficiency: Technical proficiency in programming and software engineering should correspond to the prerequisite(s) of the course. Technical proficiency with information technology, such as, but not limited to, the use of web-based online services, sending and receiving electronic mail, and desktop computer file systems, is assumed.

Final Project: The final project will be completed by a group of two students. A short abstract will need to be submitted for approval. You will also make a presentation on the project you will work on. The presentations will be scheduled prior to the end of the semester.

Important Dates:

CSUF's Academic Calendar is posted online at «<http://apps.fullerton.edu/AcademicCalendar/>». The Academic Calendar contains all the campus closures and holidays you should be aware of. CSUF's Admissions Calendar is posted online at «<http://www.fullerton.edu/admissions/Resources/Calendars.asp>». The Admissions Calendar contains all the major dates with respect to adding, dropping, and withdrawing from your classes.

Due Date for Project Proposal: the end of 8th week (03/17/2024)

Date of Midterm Exam: Monday of 9th week (03/18/2024)

Due Date for Final Project: the end of 16th week (05/12/2024)

Date of Final Exam: Monday of 17th week (05/13/2024)

Spring Recess: 04/01 – 04/07/2024

Attendance Policy: Attending class is mandatory. Missing class is not allowed unless the instructor excuses it. Missing class as part of a documented accommodation is guaranteed to be excused. The ADA accommodated student must make a reasonable effort to coordinate any absence with the instructor.

Participation: In the context of this course, participation is defined as the following:

- Arriving to class prepared and on time.
- Taking notes.
- Actively listening to the lecture and asking questions when appropriate.
- Annotating code listings and handouts.
- Bringing any required materials to class.
- When needed/desired, seeking assistance to complete assignments.
- Barring an emergency, not leaving the class session early unless the instructor consents.
- Not distracting oneself or others with smartphones, games, online diversions, etc.
- Respecting and treating the instructor and the student's peers civilly.

Required Material:

- A writing instrument
- A notebook
- A personal computer with the requisite development tools or regular access to a computer lab

Exams: The dates for the exams are listed on the syllabus. Exams cannot be taken after the test date.

Academic Dishonesty: Students are encouraged to assist one another and discuss the course materials with your peers. It is your responsibility to be aware of and follow the spirit of CSU Fullerton's academic honesty policy which can be found at «<http://www.fullerton.edu/senate/documents/PDF/300/UPS300-021.pdf>». Academic dishonesty will not be tolerated. The University Catalog and the Class Schedule provide a detailed description of Academic Dishonesty under University Regulations.

By submitting work for evaluation, you acknowledge that you have adhered to the spirit of the university's academic honesty policy and that your submission is an original work by you unless otherwise directed to work in groups. Failure to follow the spirit of the academic honesty policy will result in a severely negative evaluation of the work in question and may result in involving the Department Chair and the Judicial Affairs office to seek a disciplinary remedy.

ADA Accommodations: Any student who, because of a disability, may require special arrangements in order to meet course requirements must register with the Office of Disability Support Services within the first week of classes. The Office of Disability Support Services' website is «<http://www.fullerton.edu/DSS/>». They can be reached by phone at 657-278-3117 or TDD at 657-278-2786. Their email address is «dsservices@fullerton.edu». Their office is located in University Hall, room 101. The instructor may request verification of need from the Dean of Students Office. Students requesting accommodations shall inform their instructors during the first week of classes

about any disability or special needs that may require specific arrangements/accommodations related to attending class sessions, completing course assignments, writing papers or quizzes, tests or examinations.

Emergency Procedures: For your own safety and the safety of others, each student is expected to read and understand the guidelines published at «<http://prepare.fullerton.edu/campuspreparedness/>». Should an emergency occur, follow the instructions given to you by faculty, staff, and public safety officials. An emergency information recording is available by calling the Campus Operation and Emergency Closure line at 657-278-4444. **Instructional Continuity:** Due to an event such as an epidemic or a natural disaster that disrupts normal campus operations, students must monitor the course web site and their campus email address for any instructions and assignments that the instructor announces.

Recording & Transcription of Class Content: California Education Code section 66450 prohibits any business or person from selling or otherwise distributing or publishing class notes for a commercial purpose. Section 66451 provides for associated criminal penalties.

Recording class content is governed by UPS 330.230, «<http://www.fullerton.edu/senate/documents/PDF/300/UPS330-230.pdf>». Each instructor must permit class content to be recorded or transcribed by students when mandated to do so by the Americans with Disabilities Act or by other federal or state laws. Any recording of class content is for private use and study and shall not be made publicly accessible without the written consent of the instructor and students in the class.

Course Rules:

- All students must have an email address, be subscribed to the course mailing list and read email regularly.
- Attendance at all regularly scheduled lecture and discussion section is mandatory.
- Do not eat during lecture.
- If it makes noise, silence it.
- Portable computer use is *not* allowed in lecture except for taking notes.
- The student is responsible to be aware of any course announcements including changes to due dates and requirements.
- Work submitted must be appropriately prepared and typeset.
- Third party work (code, artwork, etc.) may not be used in student work without prior instructor consent. Failure to gain and document instructor consent will be construed as willful academic dishonesty.
- When a third party's work is incorporated into student work after gaining instructor consent, failure to wholly document the work's origin, copyright and license will be construed as willful academic dishonesty.