UNIVERSITY OF CALIFORNIA
UCMERCED

Syllabus for EECS282-01: Adv Topics in Machine Learning

Fall 2021
Instructor: Miguel Carreira-Perpinan

Designation:	EECS282: Advanced Topics in Machine Learning
Catalog Description:	The course reviews advanced topics in machine learning. Each edition of the course will focus on a different topic. It will consist of formal lectures, presentation and discussion of papers and implementation of algorithms in Matlab, C or other languages.
Text Books and Other Required Materials:	Depending on the topic, there may be a required textbook and/or a collection of papers from the literature.
Course Objectives/ Student Learning Outcomes:	Course Goals: The course is intended for graduate students who have taken an introductory course in machine learning (such as CSE176). The course reviews advanced topics in machine learning. Machine learning is the study of models and algorithms that learn information from data. Machine learning ideas underlie many algorithms in computer vision, speech processing, bioinformatics, robotics, computer graphics and other areas. Learning Outcomes: By the end of course through lectures, readings, homeworks, lab assignments and exams, students will demonstrate: - The abilities (1) to apply knowledge of mathematics and computing to the design and analysis of machine learning methods; (2) to analyze a problem and identify the computing requirements appropriate for its solution; (3) to design and conduct experiments and numerical tests of machine learning methods, and to analyze and interpret their results. - An ability to apply design and development principles in the construction and implementation of software systems of varying complexity to meet desired needs. - An ability to continue to learn and use new techniques, skills, and engineering and scientific tools for research in electrical engineering and computer science. - A dedication to advance engineering research to discover new knowledge, develop new methodologies, promote innovative thinking and research output in engineering and science. - A high standard of professional and research ethics. - An ability to communicate effectively with a range of technical audiences.
Program Learning Outcomes:	
Prerequisites by Topic:	
Course Policies:	
Academic Dishonesty Statement:	a. Each student in this course is expected to abide by the University of California, Merced's Academic Honesty Policy. Any work submitted by a student in this course for academic credit will be the student's own work. b. You are encouraged to study together and to discuss information and concepts

Designation:	EECS282: Advanced Topics in Machine Learning
	covered in lecture and the sections with other students. You can give "consulting" help to or receive "consulting" help from such students. However, this permissible cooperation should never involve one student having possession of a copy of all or part of work done by someone else, in the form of an e mail, an e mail attachment file, a diskette, or a hard copy. Should copying occur, both the student who copied work from another student and the student who gave material to be copied will both automatically receive a zero for the assignment. Penalty for violation of this Policy can also be extended to include failure of the course and University disciplinary action. c. During examinations, you must do your own work. Talking or discussion is not permitted during the examinations, nor may you compare papers, copy from others, or collaborate in any way. Any collaborative behavior during the examinations will result in failure of the exam, and may lead to failure of the course and University disciplinary action.
Disability Statement:	Accommodations for Students with Disabilities: The University of California Merced is committed to ensuring equal academic opportunities and inclusion for students with disabilities based on the principles of independent living, accessible universal design and diversity. I am available to discuss appropriate academic accommodations that may be required for student with disabilities. Requests for academic accommodations are to be made during the first three weeks of the semester, except for unusual circumstances. Students are encouraged to register with Disability Services Center to verify their eligibility for appropriate accommodations.
Topics:	Each edition of the course will focus on a different topic. The topic planned for this edition is machine learning model interpretability.
Class/laboratory Schedule:	Each week: 2 lectures of 1h 15min and 1 lab of 2h 50'
Midterm/Final Exam Schedule:	
Course Calendar:	
Professional Component:	
Assessment/Grading Policy:	
Coordinator:	Miguel Carreira-Perpinan
Contact Information:	Email: mcarreira-perpinan@ucmerced.edu Phone: 209-228-4545 Office: SE2-217
Office Hours:	By appointment by Zoom