

Lecture 00: Logistics

Introduction to Machine Learning

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My Introduction

Personal Info

- **General:** Assistant Professor at Electronics Research Institute.
- **Office:** Second floor, Electronics Research Institute
- **Email:** s_amini@sharif.edu

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Research Field

- Trustworthy Machine Learning
- Generative Modeling
- Speech and Audio Processing

Head Assistants



Figure: Borna Khodabandeh
(borna710kh@gmail.com)

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(borna710kh@gmail.com)



Figure: Amir Abbas Afzali
(amir8afzali@gmail.com)

Course Timeline

Number	Date	Topics	Coursework	Deadline
1	1403-11-27	L00 - Logistics		
2	1403-11-29	L01 - Introduction		
3	1403-12-04	L01 - Introduction		
4	1403-12-06	L02 - Univariate Probability	HW1 Release (L00 to L03)	
5	1403-12-11	L02 - Univariate Probability		
6	1403-12-13	L03 - Multivariate Probability		
7	1403-12-18	L04 - Statistics		
8	1403-12-20	L04 - Statistics		HW1
9	1403-12-25	L04 - Statistics	HW2 Release (L04 to L06)	
10	1403-12-27	L05 - Linear Algebra		
11	1404-01-16	L06 - Optimization		
12	1404-01-18	L07 - Logistic Regression		
13	1404-01-23	L07 - Logistic Regression		HW2
14	1404-01-25	L08 - Discriminant Analysis	HW3 Release (L07 to L09)	
15	1404-01-30	L09 - Linear Regression		
16	1404-02-01	L09 - Linear Regression		
17	1404-02-06	L10 - MultiLayer Perceptron	HW4 Release (L10 to L11)	
18	1404-02-08	L10 - MultiLayer Perceptron		HW3
19	1404-02-13	L11 - Convolutional Neural Networks		
20	1404-02-15	L12 - Kernel Methods		
21	1404-02-20	L12 - Kernel Methods		HW4
22	1404-02-22	L12 - Kernel Methods		
23	1404-02-27	L12 - Kernel Methods	HW5 Release (L12 to L13)	
24	1404-02-29	L13 - Decision Tree		
25	1404-03-03	L13 - Decision Tree		
26	1404-03-05	L14 - Dimensionality Reduction		
27	1404-03-10	L14 - Dimensionality Reduction		HW5
28	1404-03-12	L14 - Dimensionality Reduction	HW6 Release (L14 to L15)	
29	1404-03-17	L15 - Reinforcement Learning		
30	1404-03-19	L15 - Reinforcement Learning		

Objectives

- Foundational understanding of problem formulation in Machine Learning

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- Working with different types of Supervised/Unsupervised/Reinforcement Learning scenarios
- Training and optimization procedures
- Real-world applications

Syllabus Overview

Objectives

- Foundational understanding of problem formulation in Machine Learning
- Working with different types of Supervised/Unsupervised/Reinforcement Learning scenarios
- Training and optimization procedures
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Prerequisites

- Probability and Statistics

Don't worry! We will have ~ 11 sections to fully review main concepts especially in Probability and Statistics. The prerequisites are:

Others

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- Homework: Theory Part + [Programming Part (Toy Datasets)] + [Programming Part]

Syllabus Overview

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- Homework: Theory Part + [Programming Part (Toy Datasets)] + [Programming Part]

This course is NOT

- Probability and Statistics
- Numerical optimization
- Linear Algebra

Grade Distribution

Activity	Percentage
Project	20
Homework	30
Midterm	20
Final	30

Extra Credit

Extra credit will be assigned to active class participation (up to 5%).

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Course Attendance

Attendance is essential for learning objectives in this course due to the extensive material we'll cover. However, there's no formal attendance mandate.

Late Submissions

- You can use a total of 10 permissible late days for all homework assignments.
- You can use a maximum extension of 3 days for any single homework.
- Assignment grade reduces by 0.95 compounding factor for each day overdue beyond allowed late days.
- Solutions released 3 days post-deadline; homework not accepted afterward.

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 - Cheating
 - Fabrication
 - Plagiarism
 - Facilitating Dishonesty

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- Make sure to contact me whenever you have questions regarding *Academic Honesty*

Cheating

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Don't Try Us Please!

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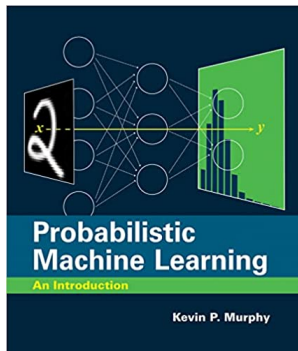
Cheating

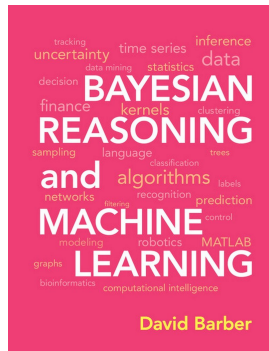
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- All homework series, midterms and final will be precisely checked for possible cheating.

Main Textbook





Learning Management Systems

For this course, we will use Sharif courseware (*CW*) for course materials.

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Contacting Me

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