Artificial Intelligence

CSE-411

Course Objective

- Introducing fundamental concepts and methods for machine learning.

Course Description

This course provides a broad introduction to machine learning and statistical pattern recognition. Topics include: supervised learning (generative/discriminative learning, parametric/non-parametric learning, neural networks, support vector machines); unsupervised learning (clustering, dimensionality reduction, kernel methods); learning theory (bias/variance tradeoffs, practical advice) etc.

Prerequisites: Basic understanding of Probability and Satistical Learning and Linear Algebra

Syllabus

S.L	Topic	Resources
1	Review on Probability	Repository CSC411 CS229 Coursera Python Kaggle
2	Review on Linear Algebra	
3	Linear and Logistic Regression	
4	Bayesian Network and Naive Bayes Classifier	
5	Neural Network	
6	Generative Learning algorithms	
7	Unsupervised Learning	
8	PCA	
9	Evaluation Metrics for Machine Learning	
10		

Marks Distribution

S.L.	Exam	Mark	Syllabus
1	Midterm	20	1 – 5
2	Final	40	5 - 10
3	Lab	25	Quiz (5) + Attendance (5) + Presentation (5) + Competition (10)
4	Class test	-	C-1 (Mid-term), C-2 (Final)
5	Assessment	15	Class Test + Class Attendance
Total		**100**	

Instructor

Md Mahedi Hasan