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 trade-offs, 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	Introduction to Statistical Learning	
3	Linear and Logistic Regression	
4	Naive Bayes Classifier	
5	Bayesian Inference	
6	Generative Learning Algorithms	
7	Unsupervised Learning Algorithms	
8	Support Vector Machines	
9	Evaluation Metrics for Machine Learning	
10	Learning Theory	

Marks Distribution

S.L.	**Exam**	**Mark**	**Syllabus**
1	Midterm	20	1 – 5
2	Final	40	5 - 10
3	Lab	25	Presentation (5) + Competition (15)
4	Quiz	-	Quiz (5)
5	Teacher's Review	15	Class Test + Class Attendance
Total		**100**	