



HANYANG UNIVERSITY

Hanyang International Winter School

Faculty Information	Name	Sungyong Baik				
	E-mail	dsybaik@hanyang.ac.kr				
	Home University	Hanyang University				
	Department	Department of Data Science				
	Homepage	dsybaik-hy.github.io				
Course Information	Class No.		Course Code	AIX0005	Credits	3
	Course Name	AI+X: Machine Learning				
	Lecture Schedule	TBA				
	Course Description	This course will provide students with more in-depth materials on deep learning. In particular, students will learn different types of neural networks and how to train them. The course will also briefly introduce wide applications of deep learning, such as computer vision and natural language processing.				
	Course Objective	Objective: By the end of the course, students should be able to: <ul style="list-style-type: none"> - Understand the theories behind how neural networks works - Understand how to train deep learning models - Understand how the deep learning models can be used in real-world applications 				
	Prerequisite	<ul style="list-style-type: none"> - Statistics - Linear Algebra - Calculus - Programming 				
	Materials/Textbooks					
Evaluation	Attendance	10%	Quiz	%		
	Assignment	%	Mid-term Exam	40%		
	Presentation	%	Final Exam	40%		
	Group Project	%	Participation	10%		
	Etc.	Evaluation Item			Ratio	
				%		
				%		
Daily Lecture Plan	Day 1	Introduction & Background				



	Day 2	Logistic Regression & SVM
	Day 3	Optimization
	Day 4	Neural networks
	Day 5	Convolutional Neural Networks (CNNs)
	Day 6	Recurrent Neural networks (RNNs)
	Day 7	Attention & Transformers
	Day 8	Generative Models
	Day 9	Visualizing & Understanding Neural Networks
	Day 10	Applications