

CS280: Deep Learning

Schedule and Syllabus

- Lecture hours: 15:00pm - 16:45pm Mon, 15:00pm - 16:45pm Wed
- Location: Teaching Center 301
- Discussion sessions: TBA

Event	Date	Description	Course Materials	Assignments Quizzes
Lecture 1	Monday 5/09 Week 1	Course Introduction Deep learning overview Course logistics Machine Learning Basics	See Piazza	
Lecture 2	Wednesday 7/09 Week 1	Basic Neural Networks Single-layer networks		Quiz 1
Lecture 3	Wednesday 14/09 Week 2	Basic Neural Networks Multi-layer Perceptrons Forward and Backpropagation		
Lecture 4	Monday 19/09 Week 3	Convolutional Neural Networks - I Convolution and pooling Equivariance		A1 Out
Lecture 5	Wednesday 21/09 Week 3	Convolutional Neural Networks - II Network Training Optimization		Quiz 2
Lecture 6	Monday 26/09 Week 4	Convolutional Neural Networks - III Network Training Regularization		
Lecture 7	Wednesday 28/09 Week 4	Convolutional Neural Networks - IV CNN architectures		Quiz 3

Event	Date	Description	Course Materials	Assignments Quizzes
National Days	Monday 3/10 Week 5	NO CLASS		
National Days	Wednesday 5/10 Week 5	NO CLASS		
Lecture 8	Saturday 8/10 Week 5	CNN in Vision - I Semantic segmentation Object detection/Segmentation		
Lecture 9	Monday 10/10 Week 6	CNN in Vision - II Visualizing/Understanding Style Transfer		A1 Due A2 Out
Lecture 10	Wednesday 12/10 Week 6	Recurrent Neural networks - I Sequence modeling, RNN BP Through Time		Quiz 4
Lecture 11	Monday 17/10 Week 7	Recurrent Neural networks - II LSTM, GRU Attention		Project Out
Lecture 12	Wednesday 19/10 Week 7	Recurrent Neural networks - III Neural MT Image caption		Quiz 5
Lecture 13	Monday 24/10 Week 8	Transformer - I Attention		
Lecture 14	Wednesday 26/10 Week 8	Transformer - II Transformer architectures		Quiz 6 A2 Due
Lecture 15	Monday 31/10 Week 9	Transformer - III Transformer Variants		A3 Out

Event	Date	Description	Course Materials	Assignments Quizzes
Lecture 16	Wednesday 02/11 Week 9	Vision/Language Application		Quiz 7
CVPR	Monday 7/11 Week 10	NO CLASS		
CVPR	Wednesday 9/11 Week 10	NO CLASS		
CVPR	Monday 14/11 Week 11	NO CLASS		
-	Wednesday 16/11 Week 11	Project Proposal		
Lecture 17	Monday 21/11 Week 12	Generative Models - I Unsupervised learning Latent variable models, EM Autoencoder		A3 Due
Lecture 18	Wednesday 23/11 Week 12	Generative Models - II Autoencoder, VAE		A4 Out
Lecture 19	Monday 28/11 Week 13	Generative Models - III GAN Basics		Quiz 8
Lecture 20	Wednesday 30/11 Week 13	Generative Models - IV GAN in vision,Improving GAN		
Lecture 21	Monday 5/12 Week 14	Generative Models - V Diffusion model Basics		Quiz 9
Lecture 22	Wednesday 7/12 Week 14	Generative Models - VI Diffusion model Application		
Lecture 23	Monday 12/12	Recent Progress in Deep Learning - I		A4 Due Quiz 10

Event	Date	Description	Course Materials	Assignments Quizzes
	Week 15	Neural Rendering		
Lecture 24	Wednesday 14/12 Week 15	Recent Progress in Deep Learning - II NR Appliction		Project Milestone
Lecture 25	Monday 19/12 Week 16	Recent Progress in Deep Learning - III Guest Lecture		
-	Wednesday 21/12 Week 16	Project		
-	Monday 26/12 Week 17	Project		
-	Wednesday 28/12 Week 17	Project		
-	Week 18	Project Presentations Subject to Exam Schedule		Project Due