

EE641 Model-Based Image and Signal Processing

Fall 2019 – Lecture, Homework, and Laboratory Schedule

Session # (Day)	Readings Due	Homework Due	Laboratory Due	Topic
1. (Aug. 19)	Chapter 1			Introduction
2. (Aug. 21)	Chapter 2.1			Probability
3. (Aug. 23)	Chapter 2.2	Homework #1		Probability
4. (Aug. 26)	Chapter 2.3			Probability
5. (Aug. 28)	Chapter 2.4			Probability
6. (Aug. 30)	Chapter 3.1-3.2	Homework #2		Causal Gaussian Models
*****Labor Day*****				
7. (Sept. 4)	Chapter 3.3			Causal Gaussian Models
8. (Sept. 6)	Chapter 3.4	Homework #3		Causal Gaussian Models
9. (Sept. 9)	Chapter 4.1-4.2			Non-Causal Gaussian Models
10. (Sept. 11)	Chapter 4.3-4.4			Non-Causal Gaussian Models
11. (Sept. 13)	Chapter 4.5-4.6	Homework #4		Non-Causal Gaussian Models
12. (Sept. 16)	Chapter 5.1			MAP with Gaussian Priors
13. (Sept. 18)	Chapter 5.2			MAP with Gaussian Priors
14. (Sept. 20)	Chapter 5.3	Homework #5		MAP with Gaussian Priors
15. (Sept. 23)	Chapter 5.4-5.5			MAP with Gaussian Priors
16. (Sept. 25)	Chapter 6.1			Non-Gaussian MRFs
17. (Sept. 27)	Chapter 6.2			Non-Gaussian MRFs
18. (Sept. 30)	Chapter 6.3-6.4		MAP Image Restoration Parts 1-2	Non-Gaussian MRFs
19. (Oct. 2)	Chapter 7.1-7.2			Non-Gaussian MAP
20. (Oct. 4)	Chapter 7.3	Homework #6		Non-Gaussian MAP
*****October Break*****				
21. (Oct. 9)	Chapter 8.1-8.2			Majorization
22. (Oct. 11)	Exam			Exam
23. (Oct. 14)	Chapter 8.3-8.4			Majorization
24. (Oct. 16)	Chapter 9.1			Constrained Optimization
25. (Oct. 18)	Chapter 9.2	Homework #7		Constrained Optimization
26. (Oct. 21)	Chapter 9.3			Constrained Optimization
27. (Oct. 23)	Chapter 9.4			Constrained Optimization
28. (Oct. 25)	Chapter 11.1-11.2		MAP Image Restoration Parts 3	EM Algorithm
29. (Oct. 28)	Chapter 11.3-11.4			EM Algorithm
30. (Oct. 30)	Chapter 11.5-11.6			EM Algorithm
31. (Nov. 1)	Chapter 11.7	Homework #8		EM Algorithm
32. (Nov. 4)	Chapter 12.1-12.2			Markov Chains and HMMs
33. (Nov. 6)	Chapter 12.3			Markov Chains and HMMs
34. (Nov. 8)	Chapter 12.4	Homework #9	The EM Algorithm	Markov Chains and HMMs
35. (Nov 11)	Chapter 13.1-13.2			General MRFs
36. (Nov 13)	Chapter 13.3			General MRFs
37. (Nov 15)	Chapter 13.4	Homework #10		General MRFs
38. (Nov. 18)	Chapter 14.1-14.2			Stochastic Simulation
*****Thanksgiving Break*****				
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39. (Nov. 25)	Chapter 14.3			Stochastic Simulation
40. (Nov. 27)	Chapter 14.4			Stochastic Simulation
41. (Nov. 29)	Chapter 14.5	Homework #11		Stochastic Simulation
42. (Dec. 2)	Chapter 15.1			MAP Segmentation
43. (Dec. 4)	Chapter 15.1			MAP Segmentation
44. (Dec. 6)			Discrete MRFs and Segmentation	Review