

Lecture #	Date	Lecture	Reading Material	Scribe
1	8/26/2008	Intro: Overview, Probability Theory, Simple Mapping	none	-
2	8/28/2008	Filtering Theory, Binary Bayes Filters	Probability: The Logic of Science, http://bayes.wustl.edu/etj/prob/book.pdf , Chapters 1 and 2 (you can skim over the derivations); Probabilistic Robotics, Chapters 1 and 2	Felix Duvallet
3	9/2/2008	Inverse Sensor Model, Importance Sampling, and Resampling	Probabilistic Robotics, Section 5.2, Chapter 6 (through 6.3), Chapter 9 (through 9.2), Section 4.3.2	Alexander Styler
4	9/4/2008	Particle Filtering	Probabilistic Robotics, Chapter 4 (focusing on 4.3)	Mark Desnoyer
5	9/9/2008	Graphical models	Thomas Minka Graphical Models Tutorial (2008-09-04_MinkaGraphicalModels.pdf)	Rehan Waliyany
6	9/11/2008	Weighted Majority and the Online Learning Approach	Avrim Blum Online Learning survey (2008-09-11_AvrilBlumOnlineLearning.pdf)	Taeyup Lee
7	9/16/2008	Convex Optimization and Gradient Descent	From Boyd's book (http://www.stanford.edu/~boyd/cvxbook/bv_cvxbook.pdf): Sections 1.1-1.3, 2.1, skim 2.2, 3.1.1-3.1.4, skim 3.1.5, 3.2.1-3.2.2	Andres Rodriguez-Perez
8	9/18/2008	Entropy, Compression and Learning	Zinkevich Online Convex Programming paper (2008_09_18_ZinkevichOnlineConvexProgramming.pdf)	Forrest Rogers-Marcovitz
9	9/23/2008	Learning by Constraints and SVMs		Dmitry Berenson
10	9/25/2008	Project Initial Presentations		-
11	9/30/2008	Random fields for Ladar data and estimation	Diebel's paper on using MRFs for range sensing (2008-10-02_DiebelMRF.pdf)	Breelyn Kane
12	10/2/2008	Bayes as Online Learning		Donald Burnette
13	10/7/2008	Bayesian Linear Regression (Part 2)		Kevin Lipkin
14	10/9/2008	Bayesian Linear Regression (Part 2), Gaussian properties		Hans Pirnay
	10/9/2008	Midterm Review Session		-
15	10/14/2008	Midterm		-

16	10/16/2008	Scoped and Self-supervised Online Learning in Outdoor Navigation	2008-10-16_SofmanNavigation.pdf, 2008-10-16_StavensRoadRoughness.pdf, 2008-10-16_DahlkampAdaptiveVision.pdf	-
17	10/21/2008	Gaussian Processes (part 1)	Chapters 1 and 2 from Rasmussen's book (http://www.gaussianprocess.org/gpml/)	Veaceslav Arabagi
18	10/23/2008	Gaussian Processes (part 2)		Mishari Alarfaj
19	10/28/2008	Kalman Filtering (part 1)	Probabilistic Robotics, Chapter 3 (3.1-3.2.3, 3.3-3.5)	Abhinav Singhal
20	10/30/2008	Kalman Filtering (part 2)		Alex Grubb
21	11/4/2008	SLAM, Fast SLAM, and Rao-Blackwellization	Probabilistic Robotics, Chapters 10, 13	Arvind Rao
22	11/6/2008	Non-linear learning with kernels (part 1)	http://books.nips.cc/papers/files/nips14/AA33.pdf	Saurabh Taneja
23	11/11/2008	Non-linear learning with kernels (part 2)		Daniel Munoz
24	11/13/2008	Gradient Boosting	http://www.lsmason.com/papers/NIPS00-DOOMII.pdf	Sergio Valcarcel
25	11/18/2008	Exponentiated Gradient		Matthew Tesch
26	11/20/2008	Object-Oriented Backpropogation		Bryan Kian Hsiang Low
27	11/25/2008	Conditional Random Fields and Filters		Yuandong Tian
	11/27/2008	NO CLASS: Thanksgiving Holiday		-
28	12/2/2008	Learning to Search: Max Margin Planning		TBA
29	12/4/2008	Final Project Presentations		-
	TBA	Final Exam Review		-
	TBA	Final Exam		-