

STAT 406 - 19 / 20 - Methods for Statistical Learning

Tentative weekly outline:

			Assgmts
Sep	03, 05	Intro, review of linear models	WW0
	10, 12	GoF vs Prediction error, Cross Validation	WW1
	17, 19	Correlated predictors, Feature selection, stepwise	WW2
	24, 26	AIC, BIC, Ridge regression, LASSO, EN	Midterm 1
Oct	01, 03	Smoothers (Local regression, Splines)	
	08, 10	Curse of dimensionality, Trees	WW3
	15, 17	Bagging	WW4 Midterm 2
	22, 24	Classification as prediction, Logistic regression, LDA, LQA	WW5
	29, 31	Nearest Neighbours, Trees, Ensembles	WW6
Nov	05, 07	Ensembles, Random Forests	WW7 Midterm 3
	12, 14	Boosting, Neural Networks?	WW8
	19, 21	Unsupervised learning, K-means, model-based clustering	WW9
	26, 28	Hierarchical clustering, PCA, Multidimensional Scaling	Midterm 4

WebWork practice problems:

- WW0: Review
- WW1: MSPE with training / test, analytical expansions of MSPE
- WW2: Stepwise + cross validation
- WW3: Regression Trees
- WW4: Regression Trees, LASSO & Bagging
- WW5: LDA + Non-parametric regression
- WW6: Classification trees, ensembles
- WW7: Out of bag error rates for Random Forests
- WW8: Prediction competition
- WW9: K-means & model-based clustering