Data Science 410
Bootstrap Algorithms and Bayesian Models

PROFESSIONAL & CONTINUING EDUCATION
UNIVERSITY of WASHINGTON

Review

- Classical hypothesis tests determine statistical significance not human importance!
  - Statistical significance determined by comparison of p-value with cut-off
  - p-value computed from distribution of test statistic
  - Create analysis plan in advance and stick to it. Resist temptation to p-value mine or data dredge
- Many types of test exist; we have only scratched the surface:
  - Test of means; example, Welch's t test
  - Tests on counts, example Chi-Squared test, nonparametric permutation tests
  - Tests for multiple groups, examples ANOVA and Tukey HSD
  - Tests on distributions, example nonparametric Kolmogorov-Smirnov test

Schedule

Part 1	Part 2	Part 3	Part 4
Lesson 1 Data Exploration 1	**Lesson 3** Combinatorics	**Lesson 6** Intro to Regression	**Lesson 9** Näive Bayes
Lesson 2 Data Exploration 2	**Lesson 4** Hypothesis Testing	**Lesson 7** Regularization	**Lesson 10** Basic Text Analysis
Milestone 1 Data Visualization	**Lesson 5** Intro to Bayes	**Lesson 8** Time Series Analysis	**Milestone 4** Independent Project
	Milestone 2 Hypothesis Sim	**Milestone 3** Regression Models	

Reminders!

- Assignment 04 is due tonight!
- Quiz 05 due February 17
- Discussion 06 must be completed by February 17
- Assignment 05 has **0 points – is optiona**l
- Milestone 02 due February 22
- Assignment 06 due February 25

It is your responsibility to manage your time for overlapping deadlines!