Data Science 410
Introduction to Linear Regression

PROFESSIONAL & CONTINUING EDUCATION
UNIVERSITY of WASHINGTON

Review

- Central Limit Theorem (CLT): Foundation in statistics
  - Errors in the mean converge to Normal
- Bootstrap methods
  - General resampling method works with most any statistic
  - Find bootstrap distribution
  - Compute point estimate and CI from bootstrap distributon
- Bayesian methods
  - Goal is to compute posterior distribution
  - Must select prior distribution
  - Update belief as evidence is collected
  - Compute MAP estimate and credible interval (HDI) from posterior distribution
  - Inference by simulation from posterior distribution

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!

- Quiz 06 due February 24
- Discussion 07 must be completed by February 24
- 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!