

STA3024 Spring 2016 Class Schedule

Ray Bai

Basic Statistical Inference

- 1/6/16: sampling distribution, Central Limit Theorem
- 1/8/16: confidence intervals, hypothesis testing
- 1/11/16: examples of confidence intervals and hypothesis tests for comparing two proportions or two means
- 1/13/16: examples of confidence intervals and hypothesis tests for comparing two proportions or two means
- 1/15/16: interpreting computer output for two-sample statistical tests and confidence intervals
- 1/18/16: **Martin Luther King Jr. Day (no class)**

Analysis of Variance

- 1/20/16: experimental design
- 1/22/16: one-way analysis of variance (ANOVA), one-way ANOVA table
- 1/25/16: one-way ANOVA examples
- 1/27/16: controlling family-wise error rate (Tukey, Fisher, Bonferroni)
- 1/29/16: controlling family-wise error rate examples
- 2/1/16: interpreting computer output for one-way ANOVA
- 2/3/16: interpreting computer output for one-way ANOVA
- 2/5/16: two-way ANOVA, two-way ANOVA table
- 2/8/16: hypothesis testing for two-way ANOVA
- 2/10/16: two-way ANOVA examples
- 2/12/16: interpreting computer output for two-way ANOVA
- 2/15/16: Exam 1 review

Exam 1: Evening of 2/19/16

Simple Linear Regression

- 2/17/16: basics of simple linear regression
- 2/19/16: inference for simple linear regression, ANOVA table for simple linear regression
- 2/22/16: simple linear regression examples
- 2/24/16: interpreting computer output for simple linear regression, residual plots, confidence and prediction intervals

- 2/26/16: class canceled (enjoy spring break!)
- 2/29/16: spring break (no class)
- 3/2/16: spring break (no class)
- 3/4/16: spring break (no class)

Multiple Linear Regression

- 3/7/16: multiple regression basics, R^2 , ANOVA table for multiple regression
- 3/9/16: multiple regression examples with computer output
- 3/11/16: multiple regression with dummy variables
- 3/13/16: multiple regression with interaction terms
- 3/16/16: residuals vs. fitted values plots, checking model assumptions for multiple linear regression
- 3/18/16: quadratic regression
- 3/21/16: model selection in multiple regression
- 3/23/16: Exam 2 review
- 3/25/16: class canceled (prepare for Exam 2)
- 3/28/16: interpreting computer output for multiple regression and model selection

Exam 2: evening of 3/25/16

Categorical Data Analysis

- 3/30/16: logistic regression
- 4/1/16: contingency tables, χ^2 test for association
- 4/4/16: conditional probabilities
- 4/6/16: 2×2 contingency tables, equivalence of χ^2 test with hypothesis test for comparing two proportions
- 4/8/16: relative risk for analyzing 2×2 contingency tables
- 4/11/16: odds ratio for analyzing 2×2 contingency table

Nonparametric Methods

- 4/13/16: Wilcoxon rank-sum/Mann-Whitney U test
- 4/15/16: Wilcoxon signed-rank test
- 4/18/16: Kruskal-Wallis H test
- 4/20/16: Final Exam review

Final Exam: morning of 4/27/16