STAT 426

Categorical Data Analysis

Spring 2022

Sooin Yun

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Office Hours: Wed 11:00 am - 12:00 pm

Teaching Assistant: Shen Yan (shenyan3@illinois.edu)

Schedule: MWF 1:00 – 1:50 pm (UG1 & GR1), MWF 2:00 – 2:50 pm (UG2 & GR2)

Location: 1090 Lincoln Hall

TA Office Hours: Wed 3:00 – 4:00 pm (UG 1 & GR 1), Wed 4:00 – 5:00 pm (UG 2 & GR 2)

Course Description: Covers fundamentals of categorical data analysis, including contingency tables, generalized linear models and methods for dependent and longitudinal data. Data analysis in R and report preparation in R Markdown are integral parts of the course.

Prerequisite(s): STAT 410 (STAT 425 is helpful).

Credit Hours: 3 undergraduate hours; 4 graduate hours.

Text(s): Not required

- **Text 1 :** Extending the Linear Model with R

- **Text 2 :** Categorical Data Analysis by Agresti

- **Text 3 :** Text 3 (recommended): R Markdown: The Definitive Guide

Software: R. You are also free to download R and R Studio and run on your local computer if you do not wish to use R Studio Cloud.

Course Evaluation:

- **Homework (250 pts):** There will be twelve homework assignments each worth 25 points that will be given during the semester as we cover the corresponding material. The lowest two homework scores will be dropped. Homework must be turned in through Compass before the end of the day on the due date as an R Markdown file. Late homework and homework by e-mail will not be accepted. Do not wait until 11:50 to turn in your homework because glitches can happen that could lead to a late assignment.

- **Data Analysis Project 1 (100 pts):** Two data analysis projects will be assigned that will be considerably larger in scope than homework and will assess skills in performing an accurate analysis to address specific questions as well as the ability to communicate the methods and results clearly. Project 1 will be posted March 25 and will be due April 13.

- **Data Analysis Project 2 (150 pts):** This will be much like project 1, except that a 15 minute presentation will also be required in addition to the data analysis report. Project 2 will be posted April 15 and will be due May 6.

Academic Integrity: You may discuss the concepts of the course and statistical computing in R issues with other students privately or on Compass, but your homework and project documents must be completed on your own without evidence of having viewed another student's solutions or code. Do not present the work of others as your own.

You have ONE week to request a grade correction after a homework or project score is posted. You should clearly present the following information to the TA:

1. Which homework or project is involved (e.g. Homework #6).

2. A detailed explanation of the suspected error.

3. The number of points you feel you should have received for the question.

Course Grade: The final course grade will be based on the total number of points earned by a student on the homework assignments (max. 250pts) and the projects (max. 250pts), for a total 500 possible points.

Letter Grade Distribution:

>= 93.00	A		73.00 - 76.99	C
90.00 - 92.99	A-		70.00 - 72.99	C-
87.00 - 89.99	B+		67.00 - 69.99	D+
83.00 - 86.99	B		63.00 - 66.99	D
80.00 - 82.99	B-		60.00 - 62.99	D-
77.00 - 79.99	C+		<= 59.99	F