SOC 5050: Lab 12

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Directions

Please complete all steps below. Your final work by hand, do-file, log-file, and markdown file with answers should be uploaded to your GitHub assignment repository by 4:20pm on Monday, November 14th, 2016. You can show your work in your do-file using the `display` command.

Correlation by Hand

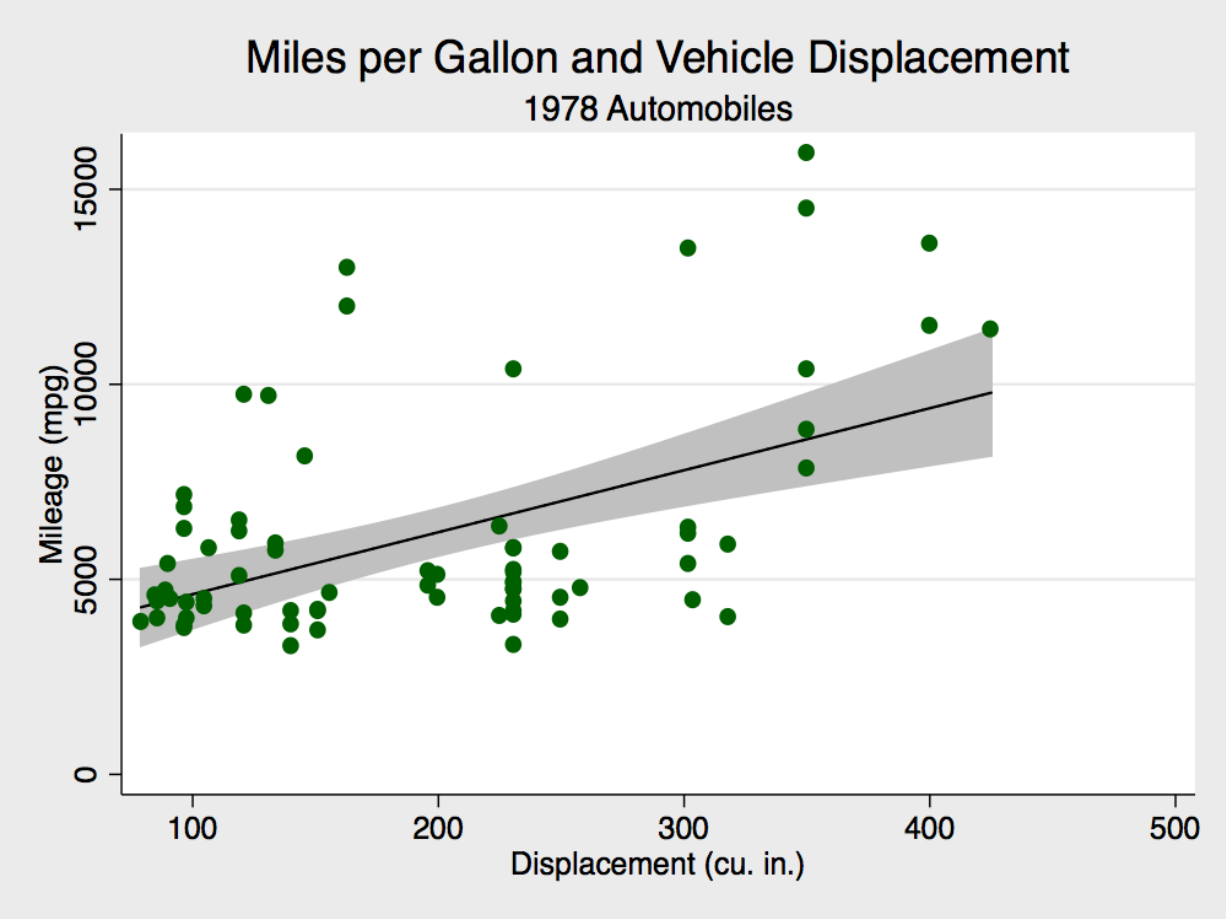
2010 Missouri Congressional Election Results

District	Population	Winner	Party	Incumbent	Turnout
1	587,000	Clay	1	1	184,779
2	706,600	Akin	0	1	265,632
3	625,300	Carnahan	1	1	203,085
4	680,000	Hartzler	0	0	225,056
5	634,000	Cleaver	1	1	191,423
6	700,000	Graves	0	1	221,912
7	722,000	Long	0	0	222,431
8	657,000	Emerson	0	1	195,999
9	683,000	Luetkemeyer	0	1	210,358

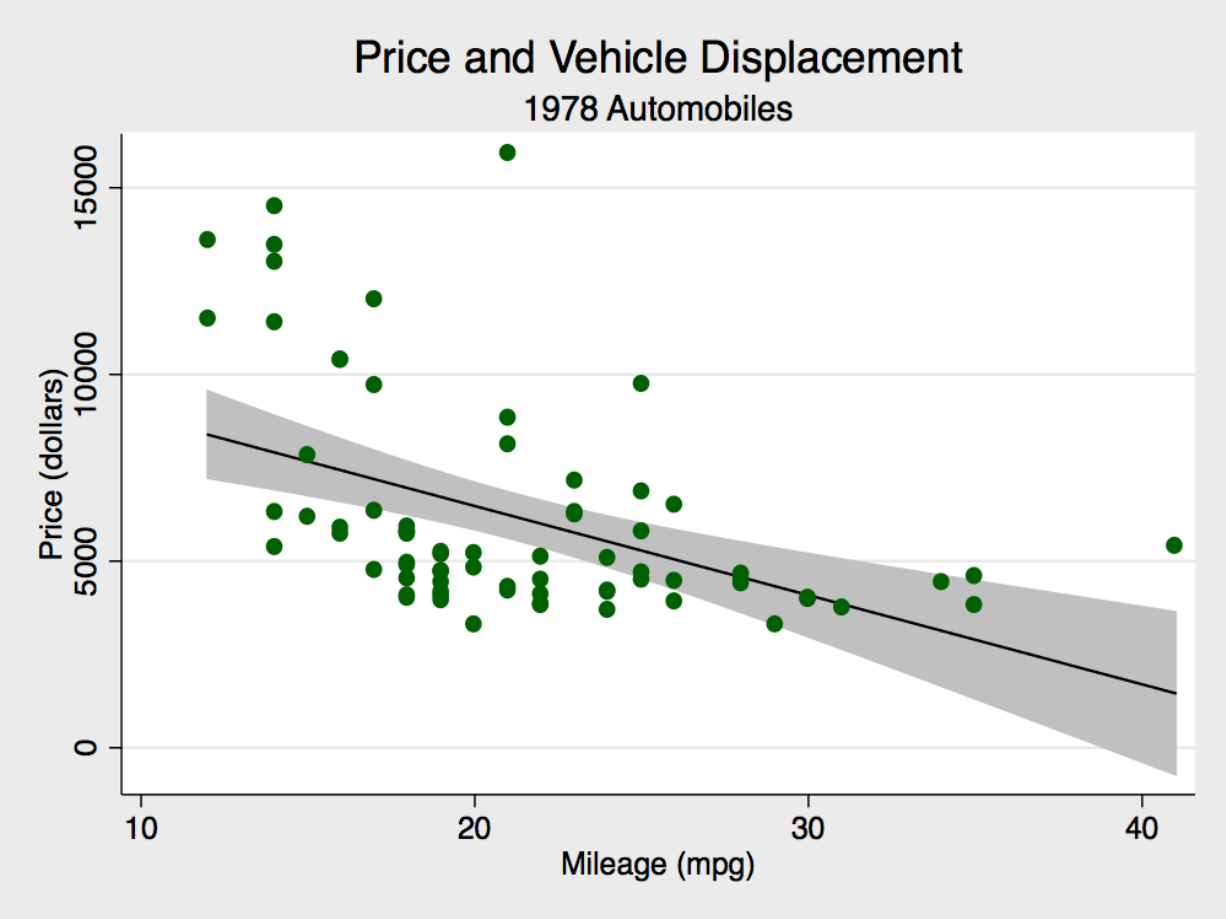
Notes: Party value labels are 0 = Republican and 1 = Democrat; Incumbent value labels are 0 = No and 1 = Yes

1. Calculate and fully interpret (including r^2) the correlation between population and turnout in the table above. Does turnout appear to follow population size?
2. Calculate and fully interpret (including r^2) the correlation between party and turnout in the table above. Are raw numbers of voters associated with turning out for races in which Democrats are the winners?
3. Calculate and fully interpret (including r^2) the correlation between incumbency and turnout in the table above. Are raw numbers of voters associated with incumbency?

Interpreting Scatterplots



4. Interpret the scatterplot above. What do you think the direction and strength of the associated correlation coefficient are? Does the "trend line" appear to be a good model for the data?



5. Interpret the scatterplot above. What do you think the direction and strength of the associated correlation coefficient are? Does the "trend line" appear to be a good model for the data?

Document Details

Document produced by Christopher Prener, Ph.D. for the Saint Louis University course SOC 5050 - QUANTITATIVE ANALYSIS: APPLIED INFERENTIAL STATISTICS. See the course wiki and the repository `README.md` file for additional details. Data are drawn from the ULCA Institute for Digital Research and Education.