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Question **1**

Not yet answered

Marked out of 1.00

R exercise. Use mtcars dataset. The correlation coefficient (Pearson linear correlation) between *disp* and *mpg* is (round with 2 decimal places). Is this correlation significant on 1% level? Answer: (paste yes or no).

Question **2**

Not yet answered

Marked out of 1.00

R exercise. Use mtcars dataset. Construct a linear regression model where *mpg* is dependent variable and all the rest columns are independent variables. For which variables the regression coefficients are significant on 15% level?

- a. cyl
- b. disp
- c. hp
- d. drat
- e. wt
- f. qsec
- g. vs
- h. am
- i. gear
- j. carb
- k. none of above

Question **3**

Not yet answered

Marked out of 1.00

R exercise. Use mtcars dataset. Construct two models (linear model and logistic regression model) where *vs* is dependent variable and *mpg*, *wt*, *cyl*, and *disp* are independent variables. For which variables the regression coefficients are significant on 15% level is both models?

- a. mpg
- b. wt
- c. cyl
- d. disp
- e. none of above

Question **4**

Not yet answered

Marked out of 2.00

R exercise. Use swiss dataset. Calculate correlation coefficients (Pearson linear correlation) between all variables. Choose which negative correlation coefficients are significant on 1% level.

- a. Fertility vs. Agriculture
- b. Fertility vs. Catholic
- c. Fertility vs. Examination
- d. Fertility vs. Education
- e. Fertility vs. Infant.Mortality
- f. Agriculture vs. Catholic
- g. Agriculture vs. Examination
- h. Agriculture vs. Education
- i. Agriculture vs. Infant.Mortality
- i. Catholic vs. Examination
- k. Catholic vs. Education
- l. Catholic vs. Infant.Mortality
- m. Examination vs. Education
- n. Examination vs. Infant.Mortality

□ ○ Education vs. Infant.Mortality

Question **5**

Not yet answered

Marked out of 2.00

R exercise. Use swiss dataset. Generate new factor variable **Religion** that should have two levels: *Non-protestant* and *Protestant*. The value of *Religion* should be created based on *Catholic* variable (*already exists in dataset*): for *Non-protestant* value of *Religion* the value of *Catholic* should be greater than **80**. Conduct a t-test in order to answer the question: Is Fertility in *Protestant* regions less than Fertility in *Non-protestant* regions on 1% level of significance? Answer: (paste yes or no). The t-test statistics is (round with 2 decimal places).

Question **6**

Not yet answered

Marked out of 2.00

R exercise. Use swiss dataset and Q5. Construct a linear regression model where *Fertility* is dependent variable and *Examination* is independent variable. Is the increase in *Examination* associated with decrease in *Fertility*? Answer: (paste yes or no). Is this effect significantly different from zero on 5% level? Answer: (paste yes or no).

Question **7**

Not yet answered

Marked out of 2.00

R exercise. Use swiss dataset and Q6. Include in the model from Q6 the categorical variable *Religion* in order to estimate main effect from it and the interaction effect with *Examination* (both constant and slope). Answer below, is now difference in *Fertility* between Non-Protestant and Protestant significant on 5% level? Answer (paste yes or no). The regression coefficient for Examination (for Non-protestant Religion) is (round with 2 decimal places).

Question 8

Not yet answered

Marked out of 2.00

R exercise. Use swiss dataset and Q5. Construct a logistic regression model where *Religion* is dependent variable and Fertility, Agriculture, and Education are independent variables. Choose all variables with statistically significant coefficients on 5% level.

- a. Agriculture
- b. Education
- c. Fertility
- d. none of above

Question 9

Not yet answered

Marked out of 2.00

Paper

<https://www.tandfonline.com/doi/full/10.1080/08985626.2022.2062618>.

Using information from Table 6 and supporting clarifications in text, please, answer the following question. Which of the following factors have the same (in terms of the sign) and statistically significant relationship on 10%-level among all 4 models? Tick all correct cases.

- a. Firm Size
- b. Leverage
- c. Ln (Firm age)
- d. State Ownership

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◀ Assignment 3

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Assignment 5 (hidden) ▶

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