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NPTEL (https://swayam.gov.in/explorer?ncCode=NPTEL) » Data Science for Engineers (course)

Register for Certification exam (https://examform.nptel.ac.in/)

Week 3: Assignment 3

Your last recorded submission was on 2021-08-18, 17:11 IST **Due date: 2021-08-25, 23:59 IST.**

1) Sum of the deviations about mean is ***1 point***

- Infinite
- One
- Zero
- None of the above

2) The mode of the normal distribution is ***1 point***

- μ
- $1/\sigma$
- σ
- None of the above

3) For the positively skewed distribution the extreme values will lie in ***1 point***

Course outline

- **How does an NPTEL online course work?**
- **Setup Guide**
- **Pre Course Material**
- **Week 0**
- **Week 1**
- **Week 2**

- Left tail of the distribution
- Right tail of the distribution
- Near mean value
- None of the above

4) The domain of the t distribution is ***1 point***

-
- $\infty \text{ to } 1$
-
- $-\infty \text{ to } \infty$
-
- $-\infty \text{ to } 0$
- None of the above

5) The statistical power of a test is denoted by ***1 point***

-
- $1-\alpha$
-
- α
-
- $1-\beta$
- None of the above

6) If type I error is decreases ***1 point***

- Type II error decreases
- Type II error increases
- Type II error remain constant
- None of the above

Download the data set “seatbelts.csv (https://drive.google.com/file/d/1tw4M03V9m3V_ZPwmtC8v6NxhSHJ9_3l7/view?usp=sharing)”. Load the data set into your R workspace and answer the questions 7 to 10.

The data set contains data about the road casualties in Great Britain between 1969 and 1984.

The description of the dataset is given below: The ‘Seatbelts’ data set in R is a multiple time-series data set that was commissioned by the Department of Transport in 1984 to measure differences in deaths before and after front seat belt

Week 4

Week 5

Download Videos

legislation was introduced on 31st January 1983. It provides monthly total numerical data on a number of incidents including those related to death and injury in Road Traffic Accidents (RTA's). The data set starts in January 1969 and observations run until December 1984.

Variable name	Description
Year	Year of the incident
Month	Month of the incident
DriversKilled	Number of car drivers killed
drivers	Total number of drivers
front	Number of front-seat passengers killed or seriously injured.
rear	Number of rear-seat passengers killed or seriously injured.
kms	Total number of distances driven
PetrolPrice	Petrol price
VanKilled	number of van ('light goods vehicle') drivers killed
law	0/1: was the law in effect that month?

7) The average number of car drivers killed after the law was in effect is ____? ***1 point***

Hint: Use the function filter from "dplyr" package to subset the dataset

- 90
- 85
- 100
- None of the above

8) How many front seat passengers were injured or killed in the year 1984 ***1 point***

- 7041
- 7047
- 7865
- None of the above

9) Calculate the variance for the variables "front" and "rear" and choose the correct option. ***1 point***

- Variance of front seat passengers is equal to variance of rear seat passengers.

- (selected) Variance of front seat passengers is greater than variance of rear seat passengers.
- Variance of front seat passengers is less than the variance of rear seat passengers.
- None of the above

10) Maximum kms driven by the driver is ___? ***1 point***

- (selected) 21626
- 17203
- 25245
- None of the above

You may submit any number of times before the due date. The final submission will be considered for grading.

Submit Answers