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Programme	:	B.Tech (CSE, BAI, BPS, BRS) and M.Tech	Semester	:	Winter 22-23
Course	:	Essentials of Data Analytics	Code	:	CSE 3506
Faculty	:	Dr. R. Rajalakshmi	Slot	:	G1 & G2

Digital Assignment – I

1. Analyse and study the need for different regression techniques viz., Linear Regression, Ridge regression, Lasso regression and Elastic Net Regression.
2. Explain the need for ANOVA in detail by identifying atleast 3 case studies. Elaborate the process of applying it for each case study.
3. Apply the ANOVA method to find whether there is any significant difference In the sales of three departmental stores situtated in the same city, using the data given below. Write your inference and also present the necessary details.

Store 1	Store 2	Store 3
500	340	390
340	250	470
230	290	370
330	357	450
236	324	550
156	246	370

4. Why forecasting techniques are popular and identify atleast 3 application areas, where it is useful. Mention the different types of forecasting techniques and its pros and cons.

5. The salesperson wants to know about the sale of raincoats that he can sell based on the rainfall during that year. You are given the data as shown in Table below.

   i) Find the correlation coefficient between the rainfall and number of raincoats. Comment on the relationship.
   ii) Obtain the regression equation to predict the sale of raincoats (y) as a function of rainfall (x)

iii) Using the obtained regression equation, predict the sale of raincoats, if the rainfall is 110 cm.

Rainfall (mm)	Sale of Raincoats
82	15
92	25
83	17
97	28
131	41
141	47
165	50
140	46
126	37