Statistics 4

Assignment 1 Question

Statistics 4: Assignment 1

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1.Introduction

This assignment will help you to consolidate the concepts learnt in the session.

2.Problem Statement

Problem Statement 1:

Is gender independent of education level? A random sample of 395 people were surveyed and each person was asked to report the highest education level they obtained. The data that resulted from the survey is summarized in the following table:

	High School	Bachelors	Masters	Ph.d.	Total
Female	60	54	46	41	201
Male	40	44	53	57	194
Total	100	98	99	98	395

Question: Are gender and education level dependent at 5% level of significance? In other words, given the data collected above, is there a relationship between the gender of an individual and the level of education that they have obtained?

Problem Statement 2:

Using the following data, perform a oneway analysis of variance using α=.05. Write up the results in APA format.

[Group1: 51, 45, 33, 45, 67]
[Group2: 23, 43, 23, 43, 45]
[Group3: 56, 76, 74, 87, 56]

Problem Statement 3:

Calculate F Test for given 10, 20, 30, 40, 50 and 5,10,15, 20, 25.

For 10, 20, 30, 40, 50:

Note: Solution submitted via github must contain all the detailed steps.

3.Output

This assignment consists of 200 marks and has to be submitted in .ipynb format in the upcoming session for evaluation.