CSCE 5310-1/4. Fall 2022

Project Final

Total 310 points (code 50 points, report 210 points, and presentation 50 points)

Randomly select 100 samples from your variable, design proper hypothesis, perform following analysis and interpret your results.

1. Claim (**5+5 points** for mean and proportion), hypothesis test (**5+5 points**), CI (**5+5 points**) and interpret (**5+5 points**) proportion, and mean of your variable. (40 points)

2. Randomly select another 200 samples; compare two sample means and proportion using hypothesis test (**5+5 points**) and CI (**5+5 points**) for your variable and interpret your results (**5+5 points**). (30 points)

3. Find correlation between your variable and target (dependent) variable (**10 points**). Use hypothesis test (**10 points**) and CI (**10 points**) to interpret (**10 points**) your results. (40 points)

4. Find liner regression equation model between your variable and target variable (**10 points**), plot regression line (**10 points**) and residual (**10 points**). Is this a good model to predict your target variable? (30 points)

5. In addition to your variable, use next two variables to find multi regression equation (**30 points**). For example, first group member creates multi regression using (v_1, v_2, v_3, v_t) and last group member creates multi regression using (v_6, v_1, v_2, v_t) where v_t is the target variable. Print your adjusted R^2 (**10 points**). There should be six different models to predict the target variable. Which one of these six models is the best model to predict your target variable, why (**10 points**)? (50 points)

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Submission
Zip your coding package and upload it with your report that is turned into pdf format. To present your contribution, record a 3 minutes video of your work. (Total 18 minutes for 6 members) and submit with your code and report on Canvas by the deadline. Do not email your files. Following table shows the files that are required to submit. Make sure to follow the format, do NOT zip all your files.

	File	points
1	Code in zip file	50
2	Report in pdf	210 (40+30+40+30+50 points)
3	Presentation	50
Total		310

Integrity
Academic Integrity Standards and Consequences. According to UNT Policy 06.003, Student Academic Integrity, academic dishonesty occurs when students engage in behaviors including, but not limited to cheating, fabrication, facilitating academic dishonesty, forgery, plagiarism, and sabotage. A finding of academic dishonesty may result in a range of academic penalties or sanctions ranging from admonition to expulsion from the University.