Homework 1

Read the insurance claims dataset.

Using SAS answer the following questions and interpret the output in each question. In other words, **focus on what do you learn** from the output of each question.

1. What is the distribution of gender, vehicle size, and vehicle class?
2. What is the average customer lifetime value of each level of gender, vehicle size, and vehicle class?
3. Do Large cars have a higher lifetime value than medsize cars. Do a ttest and report on your findings.
4. Is there a significant difference between men and women in customer lifetime value?
5. Use ANOVA to test whether there is difference in customer lifetime value across different sales channels. Which sales channel generates the highest lifetime value?
6. What demographic factors (education, income, marital\_status) affect customer lifetime value?
7. Is there a relationship between renew\_offer\_type and response (use Chi-sq test)? Which offer type generates the highest response rate?
8. Do different renew\_offer\_types have different lifetime values? Which offer type is the best?
9. Is the effectiveness of renew\_offer\_type different across different states with respect to lifetime value?
10. What other interesting insights that are useful to the company in terms of action can be obtained from the data?
    1. Write any three (3) hypotheses. The hypotheses should be useful to the insurance firm.
    2. Do appropriate statistical tests or analysis.
    3. Report what you found in each case and also write how management can use this information to improve their operations.

Submit the following on eLearning. On the coursepage there is a link “Homework Submissions”.

One student per group should submit the following two items.

* SAS code
* Answers to questions in Word document.