**Question 1** What is the distribution of gender, vehicle size, and vehicle class?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Gender** | **Frequency** | **Percent** | **Cumulative**  **Frequency** | **Cumulative**  **Percent** |
| **F** | 4658 | 51.00 | 4658 | 51.00 |
| **M** | 4476 | 49.00 | 9134 | 100.00 |

Regarding gender, 51% is female and 49% is male. The proportion of female and male are almost equal.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Vehicle\_Size** | **Frequency** | **Percent** | **Cumulative**  **Frequency** | **Cumulative**  **Percent** |
| **Large** | 946 | 10.36 | 946 | 10.36 |
| **Medsize** | 6424 | 70.33 | 7370 | 80.69 |
| **Small** | 1764 | 19.31 | 9134 | 100.00 |

Regarding vehicle size, 10.36% is large size, 70.33% is medium size, and 19.31% is small size. The number of Medsize vehicles is much higher than the other categories.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Vehicle\_Class** | **Frequency** | **Percent** | **Cumulative**  **Frequency** | **Cumulative**  **Percent** |
| **Four-Door Car** | 4621 | 50.59 | 4621 | 50.59 |
| **Luxury Car** | 163 | 1.78 | 4784 | 52.38 |
| **Luxury SUV** | 184 | 2.01 | 4968 | 54.39 |
| **SUV** | 1796 | 19.66 | 6764 | 74.05 |
| **Sports Car** | 484 | 5.30 | 7248 | 79.35 |
| **Two-Door Car** | 1886 | 20.65 | 9134 | 100.00 |

Regarding vehicle class, 50.59% is four-door cars, 1.78% is luxury car, 2.01% is luxury SUV, 19.66% is SUV, 5.30% is sports cars, and 20.65% is two-door cars. The proportion of Four-Door Car is the highest among all. The proportion of Two-Door Car and SUV are almost equal. Sports Car, Luxury SUV and Luxury Car only account for a small proportion.

**Question 2** What is the average customer lifetime value of each level of gender, vehicle size, and vehicle class?

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Analysis Variable : Customer\_Lifetime\_Value** | | | | | | |
| **Gender** | **N Obs** | **N** | **Mean** | **Std Dev** | **Minimum** | **Maximum** |
| **F** | **4658** | 4658 | 8096.60 | 6956.06 | 1898.68 | 73225.96 |
| **M** | **4476** | 4476 | 7909.55 | 6780.74 | 1898.01 | 83325.38 |

The average female and male customer lifetime values are 8096.60 and 7909.55 respectively, there’s not much of a gap between these figures.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Analysis Variable : Customer\_Lifetime\_Value** | | | | | | |
| **Vehicle\_Size** | **N Obs** | **N** | **Mean** | **Std Dev** | **Minimum** | **Maximum** |
| **Large** | **946** | 946 | 7545.00 | 6625.40 | 1940.98 | 60556.19 |
| **Medsize** | **6424** | 6424 | 8050.66 | 6833.10 | 1898.01 | 74228.52 |
| **Small** | **1764** | 1764 | 8085.10 | 7127.66 | 1898.68 | 83325.38 |

The average customer lifetime values of large, medium size and small vehicle size cars are 7545, 8050.66 and 8085.10 respectively. The average customer lifetime values of Medsize car and Small car are very close, while average customer lifetime value of large car is slightly lower.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Analysis Variable : Customer\_Lifetime\_Value** | | | | | | |
| **Vehicle\_Class** | **N Obs** | **N** | **Mean** | **Std Dev** | **Minimum** | **Maximum** |
| **Four-Door Car** | **4621** | 4621 | 6631.73 | 5164.94 | 1904.00 | 41787.90 |
| **Luxury Car** | **163** | 163 | 17053.35 | 12542.36 | 5886.22 | 83325.38 |
| **Luxury SUV** | **184** | 184 | 17123.00 | 12671.87 | 6383.61 | 73225.96 |
| **SUV** | **1796** | 1796 | 10443.51 | 7939.86 | 2864.82 | 58753.88 |
| **Sports Car** | **484** | 484 | 10750.99 | 8462.33 | 3074.11 | 67907.27 |
| **Two-Door Car** | **1886** | 1886 | 6671.03 | 5163.89 | 1898.01 | 38887.90 |

The average customer lifetime values (CLV) of Four-Door, Luxury, Luxury SUV, SUV, Sports and Two-Door cars are 6631.73, 17053.35, 17123.00, 10443.51, 10750.99 and 6671.03 respectively. The average CLV of Four-Door Car and Two-Door Car are lowest, while Luxury Car and Luxury SUV have the highest average CLV.

**Question 3** Do Large cars have a higher lifetime value than medsize cars. Do a ttest and report on your findings.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Method** | **Variances** | **DF** | **t Value** | **Pr > |t|** |
| **Pooled** | Equal | 7368 | -2.13 | 0.0329 |
| **Satterthwaite** | Unequal | 1259.7 | -2.18 | 0.0292 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Equality of Variances** | | | | |
| **Method** | **Num DF** | **Den DF** | **F Value** | **Pr > F** |
| **Folded F** | 6423 | 945 | 1.06 | 0.2183 |

After running the t-test, based on the result, the p-value in the test for Equality of Variances is 0.2183, which is greater than 0.05. We cannot reject the null hypothesis that the variances of lifetime value of large cars and lifetime value of medsize cars are equalso we’re using the t-test for equal variances.

We want to perform a 1 tail test on lifetime value (LV) of large cars and medsize cars.

Ho: LV large car >= LV medsize car

H1: LV large car < LV medsize car

T-value: -2.13 < -1.65

P-value = 0.0329/2=0.0165

We reject the null hypothesis and conclude with 95% confidence that large cars have a lower lifetime value than medsize cars.

**Question 4** Is there a significant difference between men and women in customer life time value?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Method** | **Variances** | **DF** | **t Value** | **Pr > |t|** |
| **Pooled** | Equal | 9132 | 1.30 | 0.1934 |
| **Satterthwaite** | Unequal | 9130.1 | 1.30 | 0.1932 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Equality of Variances** | | | | |
| **Method** | **Num DF** | **Den DF** | **F Value** | **Pr > F** |
| **Folded F** | 4657 | 4475 | 1.05 | 0.0847 |

After running t-test, the p-value in the test for Equality of Variances table is 0.0847, which is greater than 0.05. Therefore, we cannot reject the null hypothesis and thus assume that the variances of customer lifetime value of men and women are equal, and we will use the t-test for equal variances. Based on the result of the t-test for equal variances, the p-value is 0.1934, which is greater than 0.05. Therefore, we cannot reject the null hypothesis that there is no difference between men and women in customer lifetime value.

**Question 5** Use ANOVA to test whether there is difference in customer lifetime value across different sales channels.

The ANOVA Procedure

Dependent Variable: Customer\_Lifetime\_Value

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Source** | **DF** | **Sum of Squares** | **Mean Square** | **F Value** | **Pr > F** |
| **Model** | 3 | 124717067.24 | 41572355.748 | 0.88 | 0.4503 |
| **Error** | 9130 | 431046001860 | 47212048.396 |  |  |
| **Corrected Total** | 9133 | 431170718927 |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **R-Square** | **Coeff Var** | **Root MSE** | **Customer\_Lifetime\_Value Mean** |
| 0.000289 | 85.83577 | 6871.102 | 8004.940 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Source** | **DF** | **Anova SS** | **Mean Square** | **F Value** | **Pr > F** |
| **Sales\_Channel** | 3 | 124717067.2 | 41572355.7 | 0.88 | 0.4503 |

After running the ANOVA test, based on the result, the p-value is 0.45 which is greater than 0.05. Therefore, we cannot reject the null hypothesis and thus conclude that there is no difference in customer lifetime value across different sales channels.

**Question 6** What demographic factors (education, income, marital\_status) affect customer lifetime value?

1. Test for relationship between education and customer lifetime value:

| **Source** | **DF** | **Sum of Squares** | **Mean Square** | **F Value** | **Pr > F** |
| --- | --- | --- | --- | --- | --- |
| **Model** | 4 | 457250843.14 | 114312710.79 | 2.42 | 0.0460 |
| **Error** | 9129 | 430713468084 | 47180793.963 |  |  |
| **Corrected Total** | 9133 | 431170718927 |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Source** | **DF** | **Anova SS** | **Mean Square** | **F Value** | **Pr > F** |
| **Education** | 4 | 457250843.1 | 114312710.8 | 2.42 | 0.0460 |

After running the ANOVA, the p-value is 0.046, which is less than 0.05. Therefore, we can reject the null hypothesis and conclude with 95% confidence that there is at least one group in education levels that has different customer lifetime values from the others. The education affects customer lifetime value.

1. Test for relationship between Income and customer lifetime value

The CORR Procedure

|  |  |
| --- | --- |
| **2 Variables:** | Customer\_Lifetime\_Value Income |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Simple Statistics** | | | | | | |
| **Variable** | **N** | **Mean** | **Std Dev** | **Sum** | **Minimum** | **Maximum** |
| **Customer\_Lifetime\_Value** | 9134 | 8005 | 6871 | 73117126 | 1898 | 83325 |
| **Income** | 9134 | 37657 | 30380 | 343962509 | 0 | 99981 |

| **Pearson Correlation Coefficients, N = 9134  Prob > |r| under H0: Rho=0** | | |
| --- | --- | --- |
|  | **Customer\_Lifetime\_Value** | **Income** |
| **Customer\_Lifetime\_Value** | |  | | --- | | 1.00000 | |  | | |  | | --- | | 0.02437 | | 0.0199 | |
| **Income** | |  | | --- | | 0.02437 | | 0.0199 | | |  | | --- | | 1.00000 | |

After running CORR procedure, the resulted p-value is 0.0199, which is less than 0.05. Therefore, we reject the null hypothesis and conclude that the correlation is significantly different from 0. And the correlation between income and customer lifetime value is 0.024, which is a weak positive correlation.

1. Test for relationship between Marital status and customer lifetime value

The ANOVA Procedure

Dependent Variable: Customer\_Lifetime\_Value

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Source** | **DF** | **Sum of Squares** | **Mean Square** | **F Value** | **Pr > F** |
| **Model** | 2 | 313096315.33 | 156548157.67 | 3.32 | 0.0363 |
| **Error** | 9131 | 430857622612 | 47186247.137 |  |  |
| **Corrected Total** | 9133 | 431170718927 |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **R-Square** | **Coeff Var** | **Root MSE** | **Customer\_Lifetime\_Value Mean** |
| 0.000726 | 85.81231 | 6869.225 | 8004.940 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Source** | **DF** | **Anova SS** | **Mean Square** | **F Value** | **Pr > F** |
| **Marital\_Status** | 2 | 313096315.3 | 156548157.7 | 3.32 | 0.0363 |

After running ANOVA procedure, we get the p-value of 0.0363, which is less than 0.05. Therefore, we can reject the null hypothesis and conclude with 95% confidence that marital status does affect customer lifetime value.

**Question 7**  Is there a relationship between renew\_offer\_type and response (use Chi-sq test)? Which offer type generates the highest response rate?

Statistics for Table of Renew\_Offer\_Type by Response

|  |  |  |  |
| --- | --- | --- | --- |
| **Statistic** | **DF** | **Value** | **Prob** |
| **Chi-Square** | 3 | 548.1645 | <.0001 |
| **Likelihood Ratio Chi-Square** | 3 | 751.4675 | <.0001 |

P<0.05 -> We conclude with 95% confidence that the response ratio of at least one offer type is different from the others.

Among 4 offer types, offer 3 and offer 4 has response rate that is close to and equal to 0. Offer 1 and offer 2 has a response rate quite close to each other. Therefore, we make a subset of only these two offer types to test whether offer 1 has a lower response rate than offer 2.

| **Odds Ratio and Relative Risks** | | | |
| --- | --- | --- | --- |
| **Statistic** | **Value** | **95% Confidence Limits** | |
| **Odds Ratio** | **1.6220** | 1.4349 | 1.8334 |
| **Relative Risk (Column 1)** | **1.0985** | 1.0720 | 1.1256 |
| **Relative Risk (Column 2)** | **0.6772** | 0.6136 | 0.7475 |

We’re 95% confident that the relative risk is between 0.61 and 0.75, which is smaller than 1. Therefore, offer 1 has a lower response rate than offer 2.

We conclude that offer 2 has the highest response rate among all types of offer.

**Question 8** Do different renew\_offer\_types have different lifetime values? Which offer type is the best?

| **Source** | **DF** | **Sum of Squares** | **Mean Square** | **F Value** | **Pr > F** |
| --- | --- | --- | --- | --- | --- |
| **Model** | 3 | 3629085924.8 | 1209695308.3 | 25.83 | <.0001 |
| **Error** | 9130 | 427541633002 | 46828218.292 |  |  |
| **Corrected Total** | 9133 | 431170718927 |  |  |  |

| **R-Square** | **Coeff Var** | **Root MSE** | **Customer\_Lifetime\_Value Mean** |
| --- | --- | --- | --- |
| 0.008417 | 85.48614 | 6843.115 | 8004.940 |

| **Source** | **DF** | **Anova SS** | **Mean Square** | **F Value** | **Pr > F** |
| --- | --- | --- | --- | --- | --- |
| **Renew\_Offer\_Type** | 3 | 3629085925 | 1209695308 | 25.83 | <.0001 |

ANOVA procedure shows that F value = 25.83 and p-value<0.0001, which suggests we should reject the null hypothesis that all the means of Customer\_Lifetime\_Value among different levels of the Renew\_Offer\_Type are the same. This means different Renew\_Offer\_Types do have different lifetime values.

A Tukey’s test was performed, from which we can see that the differences between the mean of Customer\_Lifetime\_Value at the Offer1 level and the means at other levels are always greater than 0 at 95% significant level. It suggests that Offer 1 is the best type.

The ANOVA Procedure

Tukey's Studentized Range (HSD) Test for Customer\_Lifetime\_Value

|  |  |
| --- | --- |
| Note: | This test controls the Type I experimentwise error rate. |

|  |  |
| --- | --- |
| **Alpha** | 0.05 |
| **Error Degrees of Freedom** | 9130 |
| **Error Mean Square** | 46828218 |
| **Critical Value of Studentized Range** | 3.63381 |

| **Comparisons significant at the 0.05 level are indicated by \*\*\*.** | | | | |
| --- | --- | --- | --- | --- |
| **Renew\_Offer\_Type Comparison** | **Difference Between Means** | **Simultaneous 95% Confidence Limits** | |  |
| **Offer1 - Offer3** | 709.2 | 163.0 | 1255.4 | **\*\*\*** |
| **Offer1 - Offer2** | 1310.3 | 876.7 | 1744.0 | **\*\*\*** |
| **Offer1 - Offer4** | 1527.1 | 907.2 | 2147.1 | **\*\*\*** |
| **Offer3 - Offer1** | -709.2 | -1255.4 | -163.0 | **\*\*\*** |
| **Offer3 - Offer2** | 601.1 | 34.1 | 1168.2 | **\*\*\*** |
| **Offer3 - Offer4** | 817.9 | 98.3 | 1537.5 | **\*\*\*** |
| **Offer2 - Offer1** | -1310.3 | -1744.0 | -876.7 | **\*\*\*** |
| **Offer2 - Offer3** | -601.1 | -1168.2 | -34.1 | **\*\*\*** |
| **Offer2 - Offer4** | 216.8 | -421.6 | 855.2 |  |
| **Offer4 - Offer1** | -1527.1 | -2147.1 | -907.2 | **\*\*\*** |
| **Offer4 - Offer3** | -817.9 | -1537.5 | -98.3 | **\*\*\*** |
| **Offer4 - Offer2** | -216.8 | -855.2 | 421.6 |  |

**Question 9** Is the effectiveness of renew\_offer\_type different across different states with respect to lifetime value?

A two-way ANOVA test was performed, from which interaction between Renew\_Offer\_Type and State was proven not significant (p-value=0.7432). It suggests we should not reject the null hypothesis that there is no interaction between Renew\_Offer\_Type and State.

The ANOVA Procedure

Dependent Variable: Customer\_Lifetime\_Value

| **Source** | **DF** | **Sum of Squares** | **Mean Square** | **F Value** | **Pr > F** |
| --- | --- | --- | --- | --- | --- |
| **Model** | 19 | 4079881683.7 | 214730614.93 | 4.58 | <.0001 |
| **Error** | 9114 | 427090837243 | 46860965.245 |  |  |
| **Corrected Total** | 9133 | 431170718927 |  |  |  |

| **R-Square** | **Coeff Var** | **Root MSE** | **Customer\_Lifetime\_Value Mean** |
| --- | --- | --- | --- |
| 0.009462 | 85.51603 | 6845.507 | 8004.940 |

| **Source** | **DF** | **Anova SS** | **Mean Square** | **F Value** | **Pr > F** |
| --- | --- | --- | --- | --- | --- |
| **Renew\_Offer\_Type** | 3 | 3629085925 | 1209695308 | 25.81 | <.0001 |
| **State** | 4 | 51549717 | 12887429 | 0.28 | 0.8943 |
| **Renew\_Offer\_Ty\*State** | 12 | 399246042 | 33270504 | 0.71 | 0.7432 |

**Question 10** What other interesting insights that are useful to the company in terms of action can be obtained from the data? Write any 3 and indicate which type of analysis is appropriate.

**Insight 1:**

We tried to study if the Coverage types affect Customer\_Lifetime\_Value. An ANOVA test was performed, which shows that F value = 133.68 and p-value<0.0001. Thus, we should reject the null hypothesis that all the means are the same and conclude that the Coverage types does affect Customer\_Lifetime\_Value. A Tukey’test was also performed, from which we can see that the customers who chose Premium Coverage have the greatest average lifetime value.

The ANOVA Procedure

Dependent Variable: Customer\_Lifetime\_Value

| **Source** | **DF** | **Sum of Squares** | **Mean Square** | **F Value** | **Pr > F** |
| --- | --- | --- | --- | --- | --- |
| **Model** | 2 | 12265300545 | 6132650272.6 | 133.68 | <.0001 |
| **Error** | 9131 | 418905418382 | 45877277.229 |  |  |
| **Corrected Total** | 9133 | 431170718927 |  |  |  |

| **R-Square** | **Coeff Var** | **Root MSE** | **Customer\_Lifetime\_Value Mean** |
| --- | --- | --- | --- |
| 0.028447 | 84.61370 | 6773.277 | 8004.940 |

| **Source** | **DF** | **Anova SS** | **Mean Square** | **F Value** | **Pr > F** |
| --- | --- | --- | --- | --- | --- |
| **Coverage** | 2 | 12265300545 | 6132650273 | 133.68 | <.0001 |

The ANOVA Procedure

Tukey's Studentized Range (HSD) Test for Customer\_Lifetime\_Value

|  |  |
| --- | --- |
| Note: | This test controls the Type I experimentwise error rate. |

|  |  |
| --- | --- |
| **Alpha** | 0.05 |
| **Error Degrees of Freedom** | 9131 |
| **Error Mean Square** | 45877277 |
| **Critical Value of Studentized Range** | 3.31504 |

| **Comparisons significant at the 0.05 level are indicated by \*\*\*.** | | | | |
| --- | --- | --- | --- | --- |
| **Coverage Comparison** | **Difference Between Means** | **Simultaneous 95% Confidence Limits** | |  |
| **Premium - Extended** | 2105.9 | 1475.2 | 2736.7 | **\*\*\*** |
| **Premium - Basic** | 3704.9 | 3112.3 | 4297.5 | **\*\*\*** |
| **Extended - Premium** | -2105.9 | -2736.7 | -1475.2 | **\*\*\*** |
| **Extended - Basic** | 1599.0 | 1228.6 | 1969.4 | **\*\*\*** |
| **Basic - Premium** | -3704.9 | -4297.5 | -3112.3 | **\*\*\*** |
| **Basic - Extended** | -1599.0 | -1969.4 | -1228.6 | **\*\*\*** |

**Insight 2:**

We tried to test if there is a relationship between location type and response ratio with a chi-square test:

1. P<0.0001 We conclude with 95% confidence that the response ratio of at least one location type is different from the others.
2. Besides, the average response rate in the suburban area is much higher than others, which suggests that the suburban areas has the highest response rate among 3 location types.

|  |  |  |  |
| --- | --- | --- | --- |
| **Statistic** | **DF** | **Value** | **Prob** |
| **Chi-Square** | 2 | 125.1301 | <.0001 |
| **Likelihood Ratio Chi-Square** | 2 | 133.0174 | <.0001 |
| **Mantel-Haenszel Chi-Square** | 1 | 0.0273 | 0.8687 |
| **Phi Coefficient** |  | 0.1170 |  |
| **Contingency Coefficient** |  | 0.1163 |  |
| **Cramer's V** |  | 0.1170 |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  | | --- | | **Frequency** | | **Percent** | | **Row Pct** | | **Col Pct** | | | | **Table of Location\_Code by Response** | | | | | --- | --- | --- | --- | | **Location\_Code** | **Response** | | | | **No** | **Yes** | **Total** | | **Rural** | |  | | --- | | 1611 | | 17.64 | | 90.86 | | 20.59 | | |  | | --- | | 162 | | 1.77 | | 9.14 | | 12.39 | | |  | | --- | | 1773 | | 19.41 | |  | |  | | | **Suburban** | |  | | --- | | 4771 | | 52.23 | | 82.56 | | 60.96 | | |  | | --- | | 1008 | | 11.04 | | 17.44 | | 77.06 | | |  | | --- | | 5779 | | 63.27 | |  | |  | | | **Urban** | |  | | --- | | 1444 | | 15.81 | | 91.28 | | 18.45 | | |  | | --- | | 138 | | 1.51 | | 8.72 | | 10.55 | | |  | | --- | | 1582 | | 17.32 | |  | |  | | | **Total** | |  | | --- | | 7826 | | 85.68 | | |  | | --- | | 1308 | | 14.32 | | |  | | --- | | 9134 | | 100.00 | | |

**Insight 3:**

We tried to test if there is a difference in Customer lifetime value between people who are at the two education level: High school or Below and Master with a t-test:

In the test for Equality of Variances, because the p-value of equality of variances is 0.14, we cannot reject the null hypothesis that two variances are equal. With a t-test assuming equal variances, we get t-value=0.18 and P value=0.86. Therefore, We cannot reject the null hypothesis that the customer lifetime value of people with these two education levels are equal. We conclude that there are not much differences between people whose education level is "High School or Below" and "Master" in their customer lifetime value.

| **Method** | **Variances** | **DF** | **t Value** | **Pr > |t|** |
| --- | --- | --- | --- | --- |
| **Pooled** | Equal | 3361 | 0.18 | 0.8581 |
| **Satterthwaite** | Unequal | 1234.2 | 0.18 | 0.8546 |

| **Equality of Variances** | | | | |
| --- | --- | --- | --- | --- |
| **Method** | **Num DF** | **Den DF** | **F Value** | **Pr > F** |
| **Folded F** | 2621 | 740 | 1.09 | 0.1400 |