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| Test No: 4-1 |
| Analysis Statement: To study the satisfaction rate in loyalty program between male and female students. |
| Assumption Test(s): IF AN   1. Each groups(All the Jobs)must be normal. 2. Homogeneity of variance test.   Normality Test          Male  Because histogram and Q-Q plot  It’s an almost normal distribution because there are many data points which are not near to the reference line  Female  Because histogram and Q-Q plot  It’s an almost normal distribution because there are many data points which are not near to the reference line   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Group Statistics** | | | | | | |  | **성별** | **N** | **Mean** | **Std. Deviation** | **Std. Error Mean** | | **Satisfaction\_Score** | **남자** | **1414** | **9.52** | **2.081** | **.055** | | **여자** | **1123** | **9.61** | **2.137** | **.064** |   Macintosh HD:Users:v7:Desktop:스크린샷 2015-12-18 오후 7.14.10.png    Levene’s Test  : Homogenity of variance can be assumed.  : Homogenity of variance can not be assumed.  F(2535) = 0.538  Since sig = 0.463 (>0.05)  This test is nonsignificant.  Accept  Homogenity of variance can be assumed. |
| Analysis Results:  Macintosh HD:Users:v7:Desktop:스크린샷 2015-12-18 오후 7.14.10.png  Independent T-Test  : - = 0  : 0  Since sig = 0.263 (>0.05)  This test is nonsignificant.  Accept  Conclusion: The difference between two means is non-significant. |
| Conclusion(s):  The difference between two means is non-significant. |

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| Test No: 4-2 |
| Analysis Statement: To study satisfaction rate in loyalty program  among all age. |
| Assumption Test(s): IF ANY   1. Each groups(All the ages)must be normal. 2. Homogeneity of variance test.   Normality Test                      Because histogram and Q-Q plot  It’s an almost normal distribution because there are many data points which are not near to the reference line  20대  Because histogram and Q-Q plot  It’s an almost normal distribution because there are many data points which are not near to the reference line  30대  Because histogram and Q-Q plot  It’s an almost normal distribution because there are many data points which are not near to the reference line  40대  Because histogram and Q-Q plot  It’s an almost normal distribution because there are many data points which are not near to the reference line  50대 이상  Because histogram and Q-Q plot  It’s an almost normal distribution because there are many data points which are not near to the reference line  Levene’s test:   |  |  |  |  | | --- | --- | --- | --- | | **Test of Homogeneity of Variances** | | | | | Satisfaction\_Score | | | | | Levene Statistic | df1 | df2 | Sig. | | .515a | 4 | 2531 | .724 | | a. Groups with only one case are ignored in computing the test of homogeneity of variance for Satisfaction\_Score. | | | |   Sig=0.724(>0.05)  This test is non-significant  Accept  Conclusion: |
| Analysis Results:  One-Way ANOVA Test :   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **ANOVA** | | | | | | | Satisfaction\_Score | | | | | | |  | Sum of Squares | df | Mean Square | F | Sig. | | Between Groups | 24.687 | 5 | 4.937 | 1.113 | .351 | | Within Groups | 11224.396 | 2531 | 4.435 |  |  | | Total | 11249.083 | 2536 |  |  |  |   F(5,2531)=1.113, sig = 0.351(>0.05)  This test is non-significant.  Accept |
| Conclusion(s):  Conclusion : All means are the same. |

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| Test No: 4-3 |
| Analysis Statement: To study satisfaction rate in loyalty program  Among job. |
| Assumption Test(s): IF ANY   1. Each groups(All the Jobs)must be normal. 2. Homogeneity of variance test.   Normality Test                      Normality test  학생  Because histogram and Q-Q plot  It’s an almost normal distribution because there are many data points which are not near to the reference line  직장인  Because histogram and Q-Q plot  It’s an almost normal distribution because there are many data points which are not near to the reference line  주부  Because histogram and Q-Q plot  It’s an almost normal distribution because there are many data points which are not near to the reference line  자영업  Because histogram and Q-Q plot  It’s an almost normal distribution because there are many data points which are not near to the reference line  기타  Because histogram and Q-Q plot  It’s an almost normal distribution because there are many data points which are not near to the reference line  Homogeneity of Variances Test :   |  |  |  |  | | --- | --- | --- | --- | | **Test of Homogeneity of Variances** | | | | | Satisfaction\_Score | | | | | Levene Statistic | df1 | df2 | Sig. | | 1.064 | 4 | 2530 | .373 |   F(4,2530) = 1.064 Sig = 0.373(>0.05)  This test is non-significant  Accept  Conclusion :  (The variances are in the same in different groups) |
| Analysis Results:  One-Way ANOVA Test :   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **ANOVA** | | | | | | | Satisfaction\_Score | | | | | | |  | Sum of Squares | df | Mean Square | F | Sig. | | Between Groups | 62.217 | 4 | 15.554 | 3.531 | .007 | | Within Groups | 11143.497 | 2530 | 4.405 |  |  | | Total | 11205.714 | 2534 |  |  |  |   F(4,2530)=3.531, sig = 0.025(<0.05)  This test is significant.  Reject  Conclusion : At least two means are different.  Macintosh HD:Users:v7:Desktop:스크린샷 2015-12-19 오후 2.08.01.png  Comparision 1:  Since sig=0.532(>0.05)  This test is non- significant.  Accept  Conclusion :  Comparision 2:  Since sig=0.999(>0.05)  This test is non- significant.  Accept  Conclusion :  Comparision 3:  Since sig=0.999(>0.05)  This test is non-significant.  Accept  Conclusion  Comparision 4:  Since sig=0.011(<0.05)  This test is significant.  Reject  Conclusion : |
| Conclusion(s): |

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| Test No: 4-4 |
| Analysis Statement: To study satisfaction rate in loyalty program Among  monthly frequency usage. |
| Assumption Test(s): IF ANY   1. Each groups(All the monthly frequency usage)must be normal. 2. Homogeneity of variance test.   Normality Test                      Normality test  5회이하  Because histogram and Q-Q plot  It’s an almost normal distribution because there are many data points which are not near to the reference line  5 ~ 10회  Because histogram and Q-Q plot  It’s an almost normal distribution because there are many data points which are not near to the reference line  10 ~ 15회  Because histogram and Q-Q plot  It’s an almost normal distribution because there are many data points which are not near to the reference line  15 ~ 20회  Because histogram and Q-Q plot  It’s an almost normal distribution because there are many data points which are not near to the reference line  20회 이상  Because histogram and Q-Q plot  It’s an almost normal distribution because there are many data points which are not near to the reference line  Homogeneity of Variances Test :   |  |  |  |  | | --- | --- | --- | --- | | **Test of Homogeneity of Variances** | | | | | Satisfaction\_Score | | | | | Levene Statistic | df1 | df2 | Sig. | | 6.291 | 4 | 2531 | .000 |   F(4,2531) = 6.291 Sig = 0.000(<0.05)  This test is significant  Reject  Conclusion : |
| Analysis Results:  One-Way ANOVA Test :   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Robust Tests of Equality of Means** | | | | | | Satisfaction\_Score | | | | | |  | Statistica | df1 | df2 | Sig. | | Welch | 22.763 | 4 | 312.544 | .000 | | a. Asymptotically F distributed. | | | | |   All the means is same.  At least two means are different.  Welch Test:  F(4,312.544) = 22.763, sig = 0.000(<0.05)  This test is significant  Reject  Conclsion: At least two means are different  Macintosh HD:Users:v7:Desktop:스크린샷 2015-12-19 오후 3.02.52.png  Comparision 1:  Since sig=0.000(<0.05)  This test is significant.  Reject  Conclusion :  Comparision 2:  Since sig=0.000(>0.05)  This test is significant.  Reject  Conclusion :  Comparision 3:  Since sig=0.001(<0.05)  This test is significant.  Reject  Conclusion  Comparision 4:  Since sig=0.044(<0.05)  This test is significant.  Accept  Conclusion :  Comparision 5:  Since sig=0.001(<0.05)  This test is significant.  Reject  Conclusion :  Comparision 6:  Since sig=0.430(>0.05)  This test is non-significant.  Accept  Conclusion :  Comparision 7:  Since sig=1.000(>0.05)  This test is non-significant.  Accept  Conclusion |
| Conclusion(s): |

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| Test No: 4-5 |
| Analysis Statement: To study satisfaction rate in loyalty program Between victim and non-victim |
| Assumption Test(s): IF ANY   1. Both groups(victim and non-victim) must be normal 2. Homogeneity of variance test:   Normality Test          Normality test  예(Victim)  Because histogram and Q-Q plot  It’s an almost normal distribution because there are many data points which are not near to the reference line  아니오(non-Victim)  Because histogram and Q-Q plot  It’s an almost normal distribution because there are many data points which are not near to the reference line  Levene’s Test  : Homogenity of variance can be assumed.  : Homogenity of variance can not be assumed.  Macintosh HD:Users:v7:Desktop:스크린샷 2015-12-19 오후 3.34.50.png  F(2535) = 2.641  Since sig = 0.104(>0.05)  This test is non-significant.  Accept  Homogeneity of variance can be assumed. |
| Analysis Results:  Independent T-Test  : - = 0  : 0  Macintosh HD:Users:v7:Desktop:스크린샷 2015-12-19 오후 3.34.50.png  Since sig = 0.000 (<0.05)  This test is significant.  Reject |
| Conclusion(s):  The difference between two means is significant. |

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| Test No: 4-6 |
| Analysis Statement: |
| Assumption Test(s): IF ANY   1. Both variables(Satisfaction & Frequency)must be normal.   Normality Test          Satisfaction Score  Because histogram and Q-Q plot  It’s an almost normal distribution because there are many data points which are not near to the reference line  Frequency Score  Because histogram and Q-Q plot  It’s an almost normal distribution because there are many data points which are not near to the reference line |
| Analysis Results:  Pearson correlation test  : r = 0  : r 0   |  |  |  |  | | --- | --- | --- | --- | | **Correlations** | | | | |  | | Satisfaction\_Score | Frequency\_of\_usage\_Score | | Satisfaction\_Score | Pearson Correlation | 1 | .422\*\* | | Sig. (2-tailed) |  | .000 | | N | 2537 | 2327 | | Frequency\_of\_usage\_Score | Pearson Correlation | .422\*\* | 1 | | Sig. (2-tailed) | .000 |  | | N | 2327 | 2641 | | \*\*. Correlation is significant at the 0.01 level (2-tailed). | | | |   The correlation is r(2537) = 0.422, sig = 0.000(<0.05)  This test is significant  Reject |
| Conclusion(s):  There is a relationship. |

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| Test No: 4-7 |
| Analysis Statement: To study correlation between Satisfaction & Reliability |
| Assumption Test(s): IF ANY   1. Both variables(Satisfaction & Reliability)must be normal.   Normality Test          Satisfaction Score  Because histogram and Q-Q plot  It’s an almost normal distribution because there are many data points which are not near to the reference line  Reliability Score  Because histogram and Q-Q plot  It’s an almost normal distribution because there are many data points which are not near to the reference line |
| Analysis Results:  Pearson correlation test  : r = 0  : r 0   |  |  |  |  | | --- | --- | --- | --- | | **Correlations** | | | | |  | | Satisfaction\_Score | Reliability\_Score | | Satisfaction\_Score | Pearson Correlation | 1 | .133\*\* | | Sig. (2-tailed) |  | .000 | | N | 2537 | 1954 | | Reliability\_Score | Pearson Correlation | .133\*\* | 1 | | Sig. (2-tailed) | .000 |  | | N | 1954 | 2240 | | \*\*. Correlation is significant at the 0.01 level (2-tailed). | | | |   The correlation is r(1954) = 0.133, sig = 0.000(<0.05)  This test is significant  Reject |
| Conclusion(s):  There is a relationship. |