Correlation: Escore, GPA

Correlations

|  |  |
| --- | --- |
| Pearson correlation | 0.810 |
| P-value | 0.000 |

Spearman Rho: Escore, age, study, net

Correlations

|  |  |  |  |
| --- | --- | --- | --- |
|  | Escore | age | study |
| age | -0.138 |  |  |
|  | 0.339 |  |  |
|  |  |  |  |
| study | 0.788 | -0.180 |  |
|  | 0.000 | 0.212 |  |
|  |  |  |  |
| net | -0.895 | 0.121 | -0.848 |
|  | 0.000 | 0.401 | 0.000 |

*Cell Contents  
      Spearman rho  
      P-Value*

Regression Analysis: Escore versus age, GPA, study, net

Stepwise Selection of Terms

α to enter = 0.05, α to remove = 0.05

Analysis of Variance

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Source | DF | Adj SS | Adj MS | F-Value | P-Value |
| Regression | 3 | 12706345 | 4235448 | 3077.30 | 0.000 |
| age | 1 | 182800 | 182800 | 132.82 | 0.000 |
| GPA | 1 | 33642 | 33642 | 24.44 | 0.000 |
| study | 1 | 9076 | 9076 | 6.59 | 0.013 |
| Error | 47 | 64688 | 1376 |  |  |
| Total | 50 | 12771033 |  |  |  |

Model Summary

|  |  |  |  |
| --- | --- | --- | --- |
| S | R-sq | R-sq(adj) | R-sq(pred) |
| 37.0992 | 99.49% | 99.46% | 99.39% |

Coefficients

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Term | Coef | SE Coef | T-Value | P-Value | VIF |
| age | 14.31 | 1.24 | 11.52 | 0.000 | 24.29 |
| GPA | 60.3 | 12.2 | 4.94 | 0.000 | 44.54 |
| study | 6.71 | 2.61 | 2.57 | 0.013 | 8.95 |

Regression Equation

|  |  |  |
| --- | --- | --- |
| Escore | = | 14.31 age + 60.3 GPA + 6.71 study |

Fits and Diagnostics for Unusual Observations

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Obs | Escore | Fit | Resid | Std Resid |  |  |
| 1 | 410.0 | 497.7 | -87.7 | -2.64 | R | X |
| 42 | 550.0 | 473.2 | 76.8 | 2.23 | R |  |
| 43 | 551.0 | 521.8 | 29.2 | 0.87 |  | X |
| 44 | 560.0 | 450.5 | 109.5 | 2.99 | R |  |

*R  Large residual  
X  Unusual X*



Regression Analysis: Escore versus age, GPA, study, net

Forward Selection of Terms

α to enter = 0.05

Analysis of Variance

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Source | DF | Adj SS | Adj MS | F-Value | P-Value |
| Regression | 3 | 12706345 | 4235448 | 3077.30 | 0.000 |
| age | 1 | 182800 | 182800 | 132.82 | 0.000 |
| GPA | 1 | 33642 | 33642 | 24.44 | 0.000 |
| study | 1 | 9076 | 9076 | 6.59 | 0.013 |
| Error | 47 | 64688 | 1376 |  |  |
| Total | 50 | 12771033 |  |  |  |

Model Summary

|  |  |  |  |
| --- | --- | --- | --- |
| S | R-sq | R-sq(adj) | R-sq(pred) |
| 37.0992 | 99.49% | 99.46% | 99.39% |

Coefficients

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Term | Coef | SE Coef | T-Value | P-Value | VIF |
| age | 14.31 | 1.24 | 11.52 | 0.000 | 24.29 |
| GPA | 60.3 | 12.2 | 4.94 | 0.000 | 44.54 |
| study | 6.71 | 2.61 | 2.57 | 0.013 | 8.95 |

Regression Equation

|  |  |  |
| --- | --- | --- |
| Escore | = | 14.31 age + 60.3 GPA + 6.71 study |

Fits and Diagnostics for Unusual Observations

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Obs | Escore | Fit | Resid | Std Resid |  |  |
| 1 | 410.0 | 497.7 | -87.7 | -2.64 | R | X |
| 42 | 550.0 | 473.2 | 76.8 | 2.23 | R |  |
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| 44 | 560.0 | 450.5 | 109.5 | 2.99 | R |  |

*R  Large residual  
X  Unusual X*



Regression Analysis: Escore versus age, GPA, study, net

Backward Elimination of Terms

α to remove = 0.05

Analysis of Variance

|  |  |  |  |  |  |
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| Source | DF | Adj SS | Adj MS | F-Value | P-Value |
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| age | 1 | 182800 | 182800 | 132.82 | 0.000 |
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| 37.0992 | 99.49% | 99.46% | 99.39% |

Coefficients

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
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| age | 14.31 | 1.24 | 11.52 | 0.000 | 24.29 |
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Regression Equation

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| --- | --- | --- |
| Escore | = | 14.31 age + 60.3 GPA + 6.71 study |

Fits and Diagnostics for Unusual Observations

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
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| 44 | 560.0 | 450.5 | 109.5 | 2.99 | R |  |

*R  Large residual  
X  Unusual X*

