Regression in the NBA

* Y: PTS (Points)
* X: Minutes Played

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| SUMMARY OUTPUT |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| *Regression Statistics* | |  |  |  |  |  |  |  |
| Multiple R | 0.904921262 |  |  |  |  |  |  |  |
| R Square | 0.81888249 |  |  |  |  |  |  |  |
| Adjusted R Square | 0.818577064 |  |  |  |  |  |  |  |
| Standard Error | 200.2462907 |  |  |  |  |  |  |  |
| Observations | 595 |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| ANOVA |  |  |  |  |  |  |  |  |
|  | *df* | *SS* | *MS* | *F* | *Significance F* |  |  |  |
| Regression | 1 | 107508994.4 | 1.08E+08 | 2681.11745 | 3.4973E-222 |  |  |  |
| Residual | 593 | 23778456.13 | 40098.58 |  |  |  |  |  |
| Total | 594 | 131287450.5 |  |  |  |  |  |  |
|  | *Coefficients* | *Standard Error* | *t Stat* | *P-value* | *Lower 95%* | *Upper 95%* | *Lower 95.0%* | *Upper 95.0%* |
| Intercept | -80.81635175 | 13.50950845 | -5.98218 | 3.80874E-09 | -107.3486546 | -54.284 | -107.349 | -54.284 |
| Minutes Played | 0.509360016 | 0.009837096 | 51.77951 | 3.4973E-222 | 0.490040229 | 0.52868 | 0.49004 | 0.52868 |

This is a good choice, since the correlation (Multiple R) is 90% and 81% of the data lies on the regression linear line (R Square) however the negative value of the intercept doesn’t make sense.

Another variable: FG

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| SUMMARY OUTPUT |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| *Regression Statistics* | |  |  |  |  |  |  |  |
| Multiple R | 0.991632 |  |  |  |  |  |  |  |
| R Square | 0.983335 |  |  |  |  |  |  |  |
| Adjusted R Square | 0.983307 |  |  |  |  |  |  |  |
| Standard Error | 60.74175 |  |  |  |  |  |  |  |
| Observations | 595 |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| ANOVA |  |  |  |  |  |  |  |  |
|  | *df* | *SS* | *MS* | *F* | *Significance F* |  |  |  |
| Regression | 1 | 1.29E+08 | 1.29E+08 | 34990.49 | 0 |  |  |  |
| Residual | 593 | 2187909 | 3689.56 |  |  |  |  |  |
| Total | 594 | 1.31E+08 |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  | *Coefficients* | *Standard Error* | *t Stat* | *P-value* | *Lower 95%* | *Upper 95%* | *Lower 95.0%* | *Upper 95.0%* |
| Intercept | -10.0808 | 3.594206 | -2.80474 | 0.005201 | -17.1397 | -3.02188 | -17.1397 | -3.02188 |
| FG | 2.763013 | 0.014771 | 187.0575 | 0 | 2.734003 | 2.792023 | 2.734003 | 2.792023 |