Comparing OLS Regression with KNN Regression

**Model**: Predict an individual's attachment to social media given their age, income, twitter usage, instagram usage, facebook usage, and youtube usage.

**Result**: KNN Regression Weighted yielded the best result. The training set had a score of .98 and showed good homescedacity. The cross-val with 10 folds had lower variance than the other 2 models.

**Note**: Scaling the data had no impact on the results for any of the models.

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| OLS Regression Results | KNN Regression Weighted (n=30)  BEST MODEL | KNN Regression Unweighted (n=30) |
| attachment\_to\_social\_media ~ age+income+twitter+instagram+facebook+youtube  Parameter P-Value  Intercept 0.239933 2.665399e-07  age -0.002493 5.863369e-05  income 0.014272 4.016038e-04  twitter 0.032636 5.845203e-06  instagram 0.053313 3.079869e-16  facebook 0.230177 2.219131e-308  youtube 0.032129 4.265580e-07  OLS R-Squared: 0.667  Cross Val: 0.65 (+/- 0.10) | Using same predictors as OLS Regression  KNN Regression RSquared: 0.985  Cross-Val Accuracy: 0.64 (+/- 0.06) | Using same predictors as OLS Regression  KNN Regression RSquared: 0.689  Cross-Val Accuracy: 0.65 (+/- 0.06) |