Re: r−Squared Question

Source: http://sci.tech−archive.net/Archive/sci.stat.math/2005−07/msg00246.html

- *From*: radford@xxxxxxxxxxxxxx (Radford Neal)
- *Date*: 12 Jul 2005 14:20:45 GMT

In article <1121175957.796245.150510@xxxxxxxxxxxxxxxxxxxxxxxxxxxxx>,
Predictor <predictr@xxxxxxxxxxxxxxxx> wrote:

>I am trying to undertand r−squared (the coefficient of determination)
>of regression lines. If r, which is squared to obtain r−squared, is
>the correlation between the predicted Y and the observed Y, then
>doesn't that mean that any regression line whose predicted Y is a
>perfect linear function of the observed Y has an r (and thus r−squared)
>of 1?

That's true. You may be a bit confused, however. The only way that
the predicted and observed Y can be related by a linear function is if
the predicted and observed Y are identical (ie, the linear function is
observed=predicted). You may be confusing "predicted value" with
"predictor" (also known as a covariate or explanatory variable). The
predicted value is the linear function of the covariates in which the
coefficients are those found by fitting to the data.

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