Interpreting statsmodel Results

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                            OLS Regression Results
==============================================================================
Dep. Variable:                      y   R-squared:                       0.933
Model:                            OLS   Adj. R-squared:                  0.928
Method:                 Least Squares   F-statistic:                     211.8
Date:                Mon, 03 Nov 2014   Prob (F-statistic):           6.30e-27
Time:                        14:45:06   Log-Likelihood:                -34.438
No. Observations:                  50   AIC:                             76.88
Df Residuals:                      46   BIC:                             84.52
Df Model:                           3
Covariance Type:            nonrobust
==============================================================================
                 coef    std err          t      P>|t|      [95.0% Conf. Int.]
------------------------------------------------------------------------------
x1             0.4687      0.026     17.751      0.000         0.416     0.522
x2             0.4836      0.104      4.659      0.000         0.275     0.693
x3            -0.0174      0.002     -7.507      0.000        -0.022    -0.013
const          5.2058      0.171     30.405      0.000         4.861     5.550
==============================================================================
Omnibus:                        0.655   Durbin-Watson:                   2.896
Prob(Omnibus):                  0.721   Jarque-Bera (JB):                0.360
Skew:                           0.207   Prob(JB):                        0.835
Kurtosis:                       3.026   Cond. No.                         221.
==============================================================================
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Element	Description
Dep. Variable	Which variable is the response in the model.
Model	What model you are using in the fit.
Method	How the parameters of the model were calculated.
No. Observations	The number of observations (examples).
DF Residuals	Degrees of freedom of the residuals. Number of observations – number of parameters.
DF Model	Number of parameters in the model (not including the constant term if present).
R-squared	The coefficient of determination. A statistical measure of how well the regression line approximates the real data points.
Adj. R-squared	The above value adjusted based on the number of observations and the degrees-of-freedom of the residuals.
F-statistic	A measure how significant the fit is. The mean squared error of the model divided by the mean squared error of the residuals.

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Element	Description
Prob (F-statistic)	The probability that you would get the above statistic, given the null hypothesis that they are unrelated.
Log-likelihood	The log of the likelihood function.
AIC	The Akaike Information Criterion. Adjusts the log-likelihood based on the number of observations and the complexity of the model.
BIC	The Bayesian Information Criterion. Similar to the AIC, but has a higher penalty for models with more parameters.
coef	The estimated value of the coefficient.
std err	The basic standard error of the estimate of the coefficient. More sophisticated errors are also available.
t	The t-statistic value. This is a measure of how statistically significant the coefficient is.
P > ltl	P-value that the null-hypothesis that the coefficient = 0 is true. If it is less than the confidence level, often 0.05, it indicates that there is a statistically significant relationship between the term and the response.
[95.0% Conf. Interval]	The lower and upper values of the 95% confidence interval.
Skewness	A measure of the symmetry of the data about the mean. Normally-distributed errors should be symmetrically distributed about the mean (equal amounts above and below the line).
Kurtosis	A measure of the shape of the distribution. Compares the amount of data close to the mean with those far away from the mean (in the tails).
Omnibus	D'Angostino's test. It provides a combined statistical test for the presence of skewness and kurtosis.
Prob(Omnibus)	The above statistic turned into a probability.
Jarque-Bera	A different test of the skewness and kurtosis.
Prob (JB)	The above statistic turned into a probability.
Durbin-Watson	A test for the presence of autocorrelation (that the errors are not independent.) Often important in time-series analysis.
Cond. No	A test for multicollinearity (if in a fit with multiple parameters, the parameters are related with each other).

https://www.datarobot.com/blog/ordinary-least-squares-in-python/