scipy.stats.pearsonr

scipy.stats.**pearsonr**(*x*, *y*)   [source] (http://github.com/scipy/scipy/blob/v0.14.0/scipy/stats/stats.py#L2392)

Calculates a Pearson correlation coefficient and the p-value for testing non-correlation.

The Pearson correlation coefficient measures the linear relationship between two datasets. Strictly speaking, Pearson's correlation requires that each dataset be normally distributed. Like other correlation coefficients, this one varies between -1 and +1 with 0 implying no correlation. Correlations of -1 or +1 imply an exact linear relationship. Positive correlations imply that as x increases, so does y. Negative correlations imply that as x increases, y decreases.

The p-value roughly indicates the probability of an uncorrelated system producing datasets that have a Pearson correlation at least as extreme as the one computed from these datasets. The p-values are not entirely reliable but are probably reasonable for datasets larger than 500 or so.

Parameters:	**x** : (N,) array_like
	Input
	y : (N,) array_like
	Input
Returns:	*(Pearson's correlation coefficient,*
	2-tailed p-value)

References

http://www.statsoft.com/textbook/glosp.html#Pearson%20Correlation (http://www.statsoft.com/textbook/glosp.html#Pearson%20Correlation)

Previous topic

scipy.stats.f_oneway (scipy.stats.f_oneway.html)

Next topic

scipy.stats.spearmanr (scipy.stats.spearmanr.html)