

Lecture 4

Statistical Functions in Excel

<http://office.microsoft.com/en-us/excel/HP052030661033.aspx>

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| AVEDEV | Returns the average of the absolute deviations of data points from their mean |
| AVERAGE | Returns the average of its arguments |
| AVERAGEA | Returns the average of its arguments, including numbers, text, and logical values |
| BETADIST | Returns the beta cumulative distribution function |
| BETAINV | Returns the inverse of the cumulative distribution function for a specified beta distribution |
| BINOMDIST | Returns the individual term binomial distribution probability |
| CHIDIST | Returns the one-tailed probability of the chi-squared distribution |
| CHIINV | Returns the inverse of the one-tailed probability of the chi-squared distribution |
| CHITEST | Returns the test for independence |
| COMBIN | Number of combinations |
| CONFIDENCE | Returns the confidence interval for a population mean |
| CORREL | Returns the correlation coefficient between two data sets |
| COUNT | Counts how many numbers are in the list of arguments |
| COUNTA | Counts how many values are in the list of arguments |
| COUNTBLANK | Counts the number of blank cells within a range |
| COUNTIF | Counts the number of nonblank cells within a range that meet the given criteria |
| COVAR | Returns covariance, the average of the products of paired deviations |
| CRITBINOM | Returns the smallest value for which the cumulative binomial distribution is less than or equal to a criterion value |
| DEVSQ | Returns the sum of squares of deviations |
| EXPONDIST | Returns the exponential distribution |
| FDIST | Returns the F probability distribution |
| FINV | Returns the inverse of the F probability distribution |
| FISHER | Returns the Fisher transformation |
| FISHERINV | Returns the inverse of the Fisher transformation |
| FORECAST | Returns a value along a linear trend |
| FREQUENCY | Returns a frequency distribution as a vertical array |
| FTEST | Returns the result of an F-test |
| GAMMADIST | Returns the gamma distribution |
| GAMMAINV | Returns the inverse of the gamma cumulative distribution |
| GAMMALN | Returns the natural logarithm of the gamma function, $\Gamma(x)$ |
| GEOMEAN | Returns the geometric mean |
| GROWTH | Returns values along an exponential trend |
| HARMEAN | Returns the harmonic mean |
| HYPGEOMDIST | Returns the hypergeometric distribution |
| INTERCEPT | Returns the intercept of the linear regression line |
| KURT | Returns the kurtosis of a data set |
| LARGE | Returns the k-th largest value in a data set |
| LINEST | Returns the parameters of a linear trend |
| LOGEST | Returns the parameters of an exponential trend |
| LOGINV | Returns the inverse of the lognormal distribution |

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| LOGNORMDIST | Returns the cumulative lognormal distribution |
| MAX | Returns the maximum value in a list of arguments |
| MAXA | Returns the maximum value in a list of arguments, including numbers, text, and logical values |
| MEDIAN | Returns the median of the given numbers |
| MIN | Returns the minimum value in a list of arguments |
| MINA | Returns the smallest value in a list of arguments, including numbers, text, and logical values |
| MODE | Returns the most common value in a data set |
| NEGBINOMDIST | Returns the negative binomial distribution |
| NORMDIST | Returns the normal cumulative distribution |
| NORMINV | Returns the inverse of the normal cumulative distribution |
| NORMSDIST | Returns the standard normal cumulative distribution |
| NORMSINV | Returns the inverse of the standard normal cumulative distribution |
| PEARSON | Returns the Pearson product moment correlation coefficient |
| PERCENTILE | Returns the k-th percentile of values in a range |
| PERCENTRANK | Returns the percentage rank of a value in a data set |
| PERMUT | Returns the number of permutations for a given number of objects |
| POISSON | Returns the Poisson distribution |
| PROB | Returns the probability that values in a range are between two limits |
| QUARTILE | Returns the quartile of a data set |
| RANK | Returns the rank of a number in a list of numbers |
| RSQ | Returns the square of the Pearson product moment correlation coefficient |
| SKEW | Returns the skewness of a distribution |
| SLOPE | Returns the slope of the linear regression line |
| SMALL | Returns the k-th smallest value in a data set |
| STANDARDIZE | Returns a normalized value = $(x - m)/s$ |
| STDEV | Estimates standard deviation based on a sample |
| STDEVA | Estimates standard deviation based on a sample, including numbers, text, and logical values |
| STDEVP | Calculates standard deviation based on the entire population |
| STDEVPA | Calculates standard deviation based on the entire population, including numbers, text, and logical values |
| STEYX | Returns the standard error of the predicted y-value for each x in the regression |
| TDIST | Returns the Student's t-distribution |
| TINV | Returns the inverse of the Student's t-distribution |
| TREND | Returns values along a linear trend |
| TRIMMEAN | Returns the mean of the interior of a data set |
| TTEST | Returns the probability associated with a Student's t-test |
| VAR | Estimates variance based on a sample |
| VARA | Estimates variance based on a sample, including numbers, text, and logical values |
| VARP | Calculates variance based on the entire population |
| VARPA | Calculates variance based on the entire population, including numbers, text, and logical values |
| WEIBULL | Returns the Weibull distribution |
| ZTEST | Returns the one-tailed probability-value of a z-test |