

XLSTAT Spreadsheet functions

Reference document

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Statistical functions

XLSTAT_DataSim

Description: Use this function to generate sample of size N (input) that has the mean and the standard deviation provided as input.

Arguments:

mean (Double): Mean of the sample

stdev (Double): Standard deviation of the sample

size (Long): Size of the sample to generate

Optional: digits (Long, default=-1): If digits is 0 or larger, the values are rounded to the number of digits entered

Optional: seed (Long, default=123456789): Seed for the random number generation

XLSTAT_EmpiricalCDF

Description: Use this function to compute the value of the empirical cumulative distribution function corresponding to a given quantile.

Arguments:

v1 (Range): Range containing the quantitative data of the sample

Q (Double): Value of the quantile

Optional: Wg (Range): Range containing the weight of each observation

XLSTAT_GetRank

Description: Get the rank of element iPosition in a series of input values

Arguments:

v1 (Range): Range containing the input values

iPosition (Long): Position of the element that we want to get the rank for

XLSTAT_Linest

Description: Use this function to fit a linear regression model. The function can be used to compute predictions.

Arguments:

y (Range): Range containing the quantitative data corresponding to the dependent variable

X (Range): Range containing the quantitative data corresponding to the explanatory variable(s)

InterceptFree (Boolean, default=True): True to estimate the intercept. Otherwise it is fixed to 0.

Optional: tolerance (Double, default=0.0001): Tolerance

Optional: Weights (Range): Range containing the weights corresponding to each observation

Optional: SelectionMode (Long): 0=no, 1=best, 2=stepwise, 3=forward, 4=backward

Optional: Criterion (Long): 0=adj R2, 1=MSE, 2=Cp, 3=AIC, 4=SBC, 5=PC

Optional: Probaln (Double, default=0.05): Probability for a variable to be included

Optional: ProbaOut (Double, default=0.1): Probability for a variable to be excluded

Optional: MinNbVar (Long): Minimum number of explanatory variables to use in the model during the (best) selection process

Optional: MaxNbVar (Long): Maximum number of explanatory variables to use in the model during the (best) selection process

XLSTAT_Logistic

Description: Use this function to fit a logistic model and return predictions. See details on *allPredictions* to check which predictions can be returned.

Arguments:

y (Range): Range containing the qualitative data corresponding to the dependent variable

Optional: X (Range): Range containing the quantitative data corresponding to the explanatory variables (training set)

Optional: Q (Range): Range containing the qualitative data corresponding to the explanatory variables (training set)

Optional: XPred (Range): Range containing the quantitative data corresponding to the explanatory variables (prediction set)

Optional: QPred (Range): Range containing the qualitative data corresponding to the explanatory variables (prediction set)

Optional: WithLabels (Boolean, default=False): Set this option to true if the selected data contain a header, typically variable names)

Optional: iMaxIter (Double, default=100): Maximum number of iterations to fit the model

Optional: iMaxSeconds (Double, default=300): Maximum number of seconds before the algorithm is stopped

Optional: iConvergence(Long, default=0.00001): Convergence to reach before the algorithm stops

Optional: allPredictions (Boolean): If False, then only the last prediction is displayed. Otherwise, the whole vector of predictions is displayed. If a prediction sample has been selected (XPred and QPred are not provided) then the results correspond only to the prediction sample.

XLSTAT_MannWhitneyTest

Description: Use this function to compute a Mann Whitney test

Arguments:

v1 (Range): Range containing the values of the first sample

v2 (Range): Range containing the values of the second sample

Optional: Tail (Long, default=0): -1 for a left-tailed p-value / 0 for a two-tailed p-value / 1 for a right-tailed p-value

Optional: Correction (Boolean, default=True): If True, the continuity correction is applied

Optional: ExactTest (Boolean, default=False): If True and if possible, an exact test is performed

Optional: pvalOut (Boolean, default=True): If True, the function returns the p-value. If False, the U statistic is returned

XLSTAT_Proportion_CI

Description: Use this function to compute the lower and upper bounds around a proportion.

Arguments:

nObs (Long): Number of observations having the property of interest

nTotal (Double): Total number of observations

Optional: alpha (Double, default=0.05): Value of the significance level

Optional: Tail (Long, default=0): -1 for a left-tailed p-value / 0 for a two-tailed p-value / 1 for a right-tailed p-value

Optional: iCorrect (Boolean): Apply the continuity correction

Optional: Method (Long, default=1): 1 is for Wald, 2 for Wilson-Score, 3 for Clopper Pearson, 4 for Agresti Coull

XLSTAT_RandomNormal

Description: Generate a data sample from a Normal distribution.

Arguments:

Optional: Rows (Long, default=1): Sample size.

Optional: Cols (Long, default=1): Number of samples to generate.

Optional: Mu (Double, default=0): The arithmetic mean of the distribution.

Optional: Sigma (Double, default=1): The standard deviation of the distribution.

Optional: Seed (Long, default=123456789):

XLSTAT_RandomPoisson

Description: Generate a data sample from a Poisson distribution.

Arguments:

Optional: Rows (Long, default=1): Sample size.

Optional: Cols (Long, default=1): Number of samples to generate.

Optional: Lambda (Double, default=1): The expected numeric value.

Optional: Seed (Long, default=123456789):

XLSTAT_RandomUniform

Description: Generate a data sample from a discrete Uniform distribution.

Arguments:

Optional: Rows (Long, default=1): Sample size.

Optional: Cols (Long, default=1): Number of samples to generate.

Optional: iMin (Double, default=0): The minimum value in the distribution.

Optional: iMax (Double, default=1): The maximum value in the distribution

Optional: Seed (Long, default=123456789):

XLSTAT_RForests

Description: Use this function to fit a classification or a regression model on a sample described by qualitative and / or quantitative variables.

Arguments:

iYtype (Long, default=0): 0 if the dependent variable is quantitative (regression), 1 if qualitative (classification)

y (Range): Range containing the quantitative or qualitative data corresponding to the dependent variable

Optional: X (Range): Range containing the quantitative data corresponding to the explanatory variables (training set)

Optional: Q (Range): Range containing the qualitative data corresponding to the explanatory variables (training set)

Optional: XPred (Range): Range containing the quantitative data corresponding to the explanatory variables (prediction set)

Optional: QPred (Range): Range containing the qualitative data corresponding to the explanatory variables (prediction set)

Optional: WithLabels (Boolean, default=False): Set this option to true if the selected data contain a header, typically variable names)

Optional: iNbTrees (Long , default=100): The number of trees to generate

Optional: iSampleType (Long=1): 1 for sampling with replacement, 2 for sample without replacement

Optional: iSampleSize (Long): size of the sample

Optional: iMethod (Long, default=1): (1 for Bagging, 2 for Random Input)

Optional: iConvSteps (Double, default=50): Number of trees between two checks of convergence

Optional: iMaxSeconds (Double, default=300): Maximum number of seconds before the algorithm is stopped

Optional: iMaxDepth (Long, default=10): Maximum tree depth

Optional: CP (Double, default=0.0001): The Complexity parameter (in classification only, meaning if iYType=1) is used so that construction of a tree does not continue unless the overall impurity is reduced by at least a factor CP. That value must be less than 1.

Optional: iMinNodeSize (Long, default=5): minimum number of observations that every newly created node must contain after a possible split in order to allow the splitting

Optional: iMinLeafSize (Long, default=2): Minimum number of observations that a node must contain to be split

Optional: iMaxNodes (Long, default=2): Maximum number of terminal nodes a tree can have

Optional: iMTry (Long, default=0): Number M of variables to randomly choose at each node. Note that when M is equal to the total number of variables, we are in the case of bagging

Optional: allPredictions (Boolean): If False, then only the last prediction is displayed. Otherwise, the whole vector of predictions is displayed. If a prediction sample has been selected (XPred and QPred are not provided) then the results correspond only to the prediction sample.

XLSTAT_SampleOne

Description: Use this function to sample one value within a range

Arguments:

R1 (Range): Range containing the data from which the value is sampled

XLSTAT_SurveyCI

Description: Use this function to compute the lower and upper bounds around a percentage obtained after surveying a given number of individuals.

Arguments:

iPercentage (Double): Percentage obtained with the survey

nbrSurveyed (Long): Number of individuals surveyed

Optional: CIperc (Double, default=95): size of the confidence interval in %

XLSTAT_TTest

Description: Use this function to compute a Student's t-test

Arguments:

v1 (Range): Range containing the values of the first sample

Optional: v2 (Range): Range containing the values of the second sample. If v2 is not provided, a one sample t-test is performed.

Optional: Tail (Long, default=0): -1 for a left-tailed p-value / 0 for a two-tailed p-value / 1 for a right-tailed p-value

Optional: HypDiff (Double, default=0): Difference corresponding to null hypothesis

Optional: Paired (Boolean): Set to True if the samples are paired

Optional: EqualVar (Boolean): Set to True if the variances are assumed to be equal

Optional: pvalOut (Boolean, default=True): If True, the function returns the p-value. If False, the t statistic is returned

XLSTAT_WilcoxonTest

Description: Use this function to compute the Wilcoxon sign test on paired samples

Arguments:

v1 (Range): Range containing the values of the first sample.

v2 (Range): Range containing the values of the second sample.

Optional: Tail (Long, default=0): -1 for a left-tailed p-value / 0 for a two-tailed p-value / 1 for a right-tailed p-value.

Optional: Correction (Boolean, default=True): If True, the continuity correction is applied.

Optional: ExactTest (Boolean, default=False): If True, an exact test is performed.

Optional: pvalOut (Boolean, default=True): If True, the function returns the p-value. If False, the V statistic is returned.

XLSTAT_Winsorize

Description: Use this function to winsorize the data. This transformation allows to remove data that are not within an interval defined by two percentiles, p1 and p2, comprised between 0 and 1, and such that $p1 < p2$. If a value x from the sample is lower than q1, the quantile that corresponds to p1 obtained from the sample, or greater than q2 the quantile that corresponds to p2, then the value is transformed to q1 in the first case, or to q2 in the second case.

Arguments:

v1 (Range): Range containing the input data.

p1 (Double): Lower percentile

p2 (Double): Upper percentile

XLSTAT_XGBoost

Description: Use this function to fit an XGBoost model and return predictions.

Arguments:

iYtype (Long): 0 if the dependent variable is quantitative (regression), 1 if the dependent variable is binary(classification), 2 if the dependent variable is multinomial (classification).

y (Range): Range containing the quantitative or qualitative data corresponding to the dependent variable.

Optional: WithVarLabel (Boolean, default=False): Set this option to true if the selected data contain a header, typically variable names)

Optional: X (Range): Range containing the quantitative data corresponding to the explanatory variables (training set).

Optional: Q (Range): Range containing the qualitative data corresponding to the explanatory variables (training set).

Optional: Weights (Range): Range containing the weight of each observation.

Optional: XPred (Range): Range containing the quantitative data corresponding to the explanatory variables (prediction set)

Optional: QPred (Range): Range containing the qualitative data corresponding to the explanatory variables (prediction set)

Optional: MaxNbIterations (Long, default=100): Maximum number of iterations for the algorithm.

Optional: LearningRate (Double, default=0.3): Between 0 and 1, shrinkage parameter eta used after each boosting step to prevent overfitting.

Optional: MinLossReduction (Double, default=0.3): Positive value only, required to make a further partition on a leaf node of a boosting tree.

Optional: ObjectiveFunction (Long, default=0): The learning objective. 0=Classification for Binary and Multinomial response. 0=Quadratic, 1=Log-quadratic, 2=Logistic, 3=Pseudo-huber for Quantitative response.

Optional: Metric (Long, default=0): The evaluation metric. 0=Error, 1=AUCPR for Binary response. 0=Error, 1=Cross-entropy for Multinomial response. 0=RMSE, 1=RMSLE, 2=MAE, 3=MAPE, 4=MPHE for Quantitative response.

Optional: L1Regularization (Double, default=0): Regularization parameter alpha.

Optional: L2Regularization (Double, default=1): Regularization parameter beta.

Optional: MinSonSize (Long, default=2): Minimum number of observations that every newly created leaf node must contain after a possible split to allow the splitting.

Optional: MaxDepth (Long, default=6): Maximum depth of the trees.

Optional: SubSamplingRatio (Double, default=1): Subsample ratio of the training instance. Setting it to 0.5 means that XGBoost would randomly sample half of the training data prior to growing trees.

Optional: ColumnSamplingByTree (Double, default=1): Subsample ratio of columns when constructing each tree. Subsampling occurs once every tree is constructed.

Optional: ColumnSamplingByLevel (Double, default=1): Subsample ratio of columns for each level. Subsampling occurs once for every new depth level reached in a tree.

Optional: ColumnSamplingByNode (Double, default=1): Subsample ratio of columns for each node (split). Subsampling occurs once every time a new split is evaluated. Columns are subsampled from the set of columns chosen for the current level.

XLSTAT_ZScores

Description: Use this function to compute the Z-score. The formula that is used to calculate Z-Score is $Z=(x-\mu)/\sigma$.

Arguments:

v1 (Range): Range containing the input data.

Optional: Wg (Range): Range containing the weight of each observation

Results: The results give the Z-score of each observation.

Time series functions

XLSTAT_ARIMA

Description: Use this function to fit an ARIMA model to your data. The model can be used to make predictions on new data

Arguments:

v1 (Range): Range corresponding to values taken by the time series

Optional: p (Long): The order of the autoregressive part of the model. For example, enter 1 for an AR(1) model or for an ARMA(1,2) model

Optional: D (Long): The differencing order of the model. For example, enter 1 for an ARIMA(0,1,2) model.

Optional: Q (Long): The order of the moving average part of the model. For example, enter 2 for a MA(2) model or for an ARIMA(1,1,2) model.

Optional: pp (Long): The order of the autoregressive seasonal part of the model. For example, enter 1 for an ARIMA(1,1,0)(1,1,0)¹² model. You can modify this value only if dd is not 0. If dd=0, XLSTAT considers that pp=0.

Optional: dd (Long): The differencing order for the seasonal part of the model. For example, enter 1 for an ARIMA(0,1,1)(0,1,1)¹² model.

Optional: qq (Long): The order of the moving average seasonal part of the model. For example, enter 1 for an ARIMA(0,1,1)(0,1,1)¹² model. You can modify this value only if dd is not 0. If dd=0, XLSTAT considers that qq=0

Optional: s (Long): Seasonality or period

Optional: X (Range): Quantitative explanatory variables (or covariates)

Optional: Xmode (Long, default=1): 1 for OLS / 2 for CO-LS / 3 for GLS

Optional: Center (Boolean, default=True): If True, the data are first centered

Optional: nPredictions (Long, default=1): Number of steps to predict. If and X and XPred are available nPredictions must match the number of observations in XPred

Optional: XPred (Range): Quantitative explanatory variables (or covariates) for the prediction set. It must be selected if X is selected and nPredictions>0. nPredictions must match the number of observations in XPred

Optional: nIter (Long, default=500): Maximum number of iterations for the fitting algorithm

XLSTAT_ARIMA2

Description: Use this function to fit an ARIMA model to your data and make predictions on new data

Arguments:

v1 (Range): Range corresponding to values taken by the time series

Optional: p (Long): The order of the autoregressive part of the model. For example, enter 1 for an AR(1) model or for an ARMA(1,2) model

Optional: D (Long): The differencing order of the model. For example, enter 1 for an ARIMA(0,1,2) model.

Optional: Q (Long): The order of the moving average part of the model. For example, enter 2 for a MA(2) model or for an ARIMA(1,1,2) model.

Optional: pp (Long): The order of the autoregressive seasonal part of the model. For example, enter 1 for an ARIMA(1,1,0)(1,1,0)¹² model. You can modify this value only if dd is not 0. If dd=0, XLSTAT considers that pp=0.

Optional: dd (Long): The differencing order for the seasonal part of the model. For example, enter 1 for an ARIMA(0,1,1)(0,1,1)¹² model.

Optional: qq (Long): The order of the moving average seasonal part of the model. For example, enter 1 for an ARIMA(0,1,1)(0,1,1)¹² model. You can modify this value only if dd is not 0. If dd=0, XLSTAT considers that qq=0

Optional: s (Long): Seasonality or period

Optional: X (Range): Quantitative explanatory variables (or covariates)

Optional: Xmode (Long, default=1): 1 for OLS / 2 for CO-LS / 3 for GLS

Optional: Center (Boolean, default=True): If True, the data are first centered

Optional: nPredictions (Long, default=1): Number of steps to predict. If and X and XPred are available nPredictions must match the number of observations in XPred

Optional: XPred (Range): Quantitative explanatory variables (or covariates) for the prediction set. It must be selected if X is selected and nPredictions>0. nPredictions must match the number of observations in XPred

Optional: nIter (Long, default=500): Maximum number of iterations for the fitting algorithm

XLSTAT_ExpoSmooth

Description: Use this function to fit an Exponential Smoothing to your data. The model can be used to make predictions on a given number of next steps

Arguments:

v1 (Range): Range corresponding to values taken by the time series

Optional: ModelID (Long, default=2): 1: simple, 2: double

Optional: S1Type (Long, default=2): Method to initialize the series

Optional: Optimize (Boolean, default=True): True to optimize the value of alpha

Optional: alpha (Double=0.2): Value or initial value of alpha

Optional: nPredictions (Long): Number of steps to predict

Results: The first column of the results table gives predictions on the training set and for the nPredictions new steps. The second column gives the model coefficients.

XLSTAT_ExpoSmooth2

Description: Use this function to fit an Exponential Smoothing to your data, and make predictions on a given number of next steps.

Arguments:

v1 (Range): Range corresponding to values taken by the time series

Optional: nPredictions (Long, default=1): Number of predictions

Optional: ModelID (Long, default=2): 1: simple, 2: double

Optional: S1Type (Long, default=2): Method to initialize the series

Results: The results give the predictions for the nPredictions new steps.

XLSTAT_Garch

Description: Use this function to fit an ARCH or GARCH model, and make predictions on one or more steps ahead.

Arguments:

v1 (Range): Range corresponding to values taken by the time series

Optional: ARCH_Order (Long, default=1): Order of the ARCH part

Optional: GARCH_Order (Long, default=1): Order of the GARCH part

Optional: nPredictions (Long, default=1): Number of steps to predict

XLSTAT_HoltWinters

Description: Use this function to fit a Holt-Winters model to a time series, or use the alpha, beta and gamma parameters provided as input. You can also make predictions on a given number of next steps.

Arguments:

v1 (Range): Range corresponding to values taken by the time series

Optional: ModelID (Long, default=2): 1: linear, 2: additive seasonal, 3: multiplicative seasonal

Optional: S1Type (Long, default=2): Type of S1 statistic (initial computation of predictions).

Optional: Period (Long, default=12): Period of the model

Optional: Optimize (Boolean, default=True): If True, the

Optional: alpha (Double=0.2): Value or initial value of the alpha coefficient

Optional: beta (Double=0.2): Value or initial value of the beta coefficient

Optional: gamma (Double=0.2): Value or initial value of the gamma coefficient

Optional: nPredictions (Long): Number of predictions to make

Results: The first column of the results table gives predictions on the training set and for the nPredictions new steps. The second column gives the model coefficients. The third column gives the goodness of fit statistics.

XLSTAT_HoltWinters2

Description: Use this function to fit a Holt-Winters model to a time series, and make predictions on a given number of next steps.

Arguments:

v1 (Range): Range corresponding to values taken by the time series

Optional: Period (Long, default=12): Period of the model

Optional: nPredictions (Long, default=1): Number of predictions to make

Optional: ModelID (Long, default=2): 1: linear, 2: additive seasonal, 3: multiplicative seasonal

Optional: S1Type (Long, default=1): Type of S1 statistic (initial computation of predictions).

Results: The results table gives predictions for the nPredictions new steps

Descriptive statistics functions

XLSTAT_Biserial

Description: Use this function to compute the Biserial correlation coefficient

Arguments:

Quanti (Range): Range containing the quantitative data

Quali (Range): Range containing the binary data

Optional: Wg (Range): Range containing the weight of each observation

Optional: WithPValue (Boolean): True if you want to obtain the p-value

Optional: MonteCarlo (Boolean): True if you want to estimate the p-value with Monte Carlo simulations

Optional: nSimulations (Long): if MonteCarlo is True, enter the number of simulations to perform

Optional: Tail (Long, default=0): -1 for a left-tailed p-value / 0 for a two-tailed p-value / 1 for a right-tailed p-value

XLSTAT_Centile

Description: Use this function to compute the centile of a sample

Arguments:

v1 (Range): Select the range containing the quantitative data of the sample

p (Double): Enter the value of the percentile

Optional: Wg (Range): Select the range containing the weight of each observation

XLSTAT_Covar

Description: Use this function to compute the covariance between two variables

v1 (Range): Range containing the values of a first variable

v2 (Range): Range containing the values of a second variable

Optional: Wg (Range): Range containing the weight of each observation

Optional: Unbiased (Boolean): True to compute the unbiased covariances (divide by the Sum of weights minus 1)

XLSTAT_Correl

Description: Use this function to compute the covariance between two variables

v1 (Range): Range containing the values of a first variable

v2 (Range): Range containing the values of a second variable

Optional: Wg (Range): Range containing the weight of each observation

XLSTAT_FisherExact

Description: Use this function to compute the Fisher exact test on a contingency table. The p-value is returned

Arguments:

Table (Range): Cells corresponding to the input contingency table.

Optional: Tail (Long, default=0): -1 for a left-tailed p-value / 0 for a two-tailed p-value / 1 for a right-tailed p-value

XLSTAT_GMean

Description: Use this function to compute the sample geometric mean

Arguments:

v1 (Range): Range containing the sample data

Optional: Wg (Range): Range containing the weight of each observation

XLSTAT_GSD

Description: Use this function to compute the geometric standard deviation

Arguments:

v1 (Range): Range containing the sample data

Optional: Wg (Range): Range containing the weight of each observation

XLSTAT_Kendall

Description: Use this function to compute the Kendall correlation coefficient

Arguments:

v1 (Range): Range containing the values of a first variable

v2 (Range): Range containing the values of a second variable

Optional: Wg (Range): Range containing the weight of each observation

XLSTAT_Kurtosis

Description: Use this function to compute the Kurtosis of the sample

Arguments:

v1 (Range): Range containing the sample data

Optional: Wg (Range): Range containing the weight of each observation

Optional: iType (Long, default=1): 1 for Pearson, 2 for Fisher

XLSTAT_Mean

Description: Use this function to compute the sample mean. This function exists in Excel, but this version allows to take into accounts weights if necessary

Arguments:

v1 (Range): Range containing the sample data

Optional: Wg (Range): Range containing the weight of each observation

XLSTAT_PartialCorrel

Description: Use this function to compute the correlation coefficient between X and Y controlling for Z.

Arguments:

X (Range): Range containing the sample data corresponding to variable X

Y (Range): Range containing the sample data corresponding to variable Y

Z (Range): Range containing the sample data corresponding to variable Z

Optional: Wg (Range): Range containing the weight of each observation

Optional: ispVal (Boolean, default=False): If True, returns the p-value. if False returns the coefficient.

XLSTAT_PartialCorrelMatrix

Description: Use this function to compute partial correlation coefficient between variables X_i and X_j , partialling out for Z where Z is corresponds to all other variables in the matrix.

Arguments:

X (Range): Range corresponding to the X (n x p) matrix

Optional: Wg (Range): Range containing the weight of each observation

XLSTAT_Qn

Description: Use this function to compute the Qn robust scale statistic (a robust alternative to of the standard deviation). If requested (see iWithError argument), the function can reproduce the errors

that have been applied because of a mistake in the original paper describing the statistic and in the later ISO 13528 standard.

Arguments:

X (Range): Range containing the quantitative data to on which Q_n should be computed

Optional: iAlgo (Long, default=0): 0, automatic, 1 naïve algorithm, 2 naïve compressed, 3 optimal for $n > 30$.

Optional: iWithError (Long): 0 with no error / 1 with original error / 2 with error from ISO 13528-2015

XLSTAT_Rescale

Description: Use this function to rescale the input sample between a minimum and maximum value.

Arguments:

X (Range): Range containing the quantitative data to rescale

Optional: min (Double, default=0): Minimum value

Optional: max (Double, default=1): Maximum value

XLSTAT_RVcoefficient

Description: Use this function to compute the RV coefficient between two matrices $X_1(n, p)$ and $X_2(n, q)$. The results include the RV, the Adjusted RV coefficients and the p-value.

Arguments:

X1 (Range): Range containing the data of the first matrix

X2 (Range): Range containing the data of the second matrix

Optional: DimMethod (Long, default=0): If 0, then all variables are used. Otherwise the number of variables (starting with the first within each matrix) will vary from FromDim to ToDim.

Optional: FromDim=1): First number of variables used

Optional: ToDim=1): Last number of variables used

Optional: WithPermut (Boolean): Tells if the p-value is computed using random permutations

Optional: NbrPermutations (Long, default=5000): Number of permutations

Optional: maxTime (Long, default=180): Maximum time spent running permutations

XLSTAT_Spearman

Description: Use this function to compute the Spearman correlation coefficient

Arguments:

v1 (Range): Range containing the values of a first variable

v2 (Range): Range containing the values of a second variable

Optional: Wg (Range): Range containing the weight of each observation

'SelectionMode: 0=no,1=base): 2=stepwise): 3=forward): 4=backward

'Criterion: 0=adj R2): 1=mse): 2=cp): 3=aic): 4=sbc): 5=pc

XLSTAT_StDev

Description: Use this function to compute the sample standard deviation of the sample. This function exists in Excel, but this version allows to take into accounts weights if necessary

Arguments:

v1 (Range): Range containing the sample data

Optional: Wg (Range): Range containing the weight of each observation

XLSTAT_StDevP

Description: Use this function to compute the population standard deviation of the sample. This function exists in Excel, but this version allows to take into accounts weights if necessary

Arguments:

v1 (Range): Range containing the sample data

Optional: Wg (Range): Range containing the weight of each observation

XLSTAT_Var

Description: Use this function to compute the sample variance of the sample. This function exists in Excel, but this version allows to take into accounts weights if necessary

Arguments:

v1 (Range): Range containing the sample data

Optional: Wg (Range): Range containing the weight of each observation

XLSTAT_VarP

Description: Use this function to compute the population variance of the sample. This function exists in Excel, but this version allows to take into accounts weights if necessary

Arguments:

v1 (Range): Range containing the sample data

Optional: Wg (Range): Range containing the weight of each observation

Matrix functions

XLSTAT_MDeterminant

Description: Use this function to compute the determinant or the log of the determinant of a matrix

Arguments:

Matrix (Range): Select the range corresponding to the input matrix

Optional: iTakeLog (Boolean, default=False): Set to True if you want to compute the log of the determinant

XLSTAT_MInverseX

Description: Use this function to compute the inverse of a square matrix. The Moore-Penrose inverse can be computed.

Arguments:

XMatrix (Range): Cells corresponding to the input square (n x n) matrix

MooreP (Boolean, default=False): Set it to true to use the Moore-Penrose approach.

XLSTAT_MProduct_trXX

Description: Use this function to compute the product of a transposed matrix times the non-transposed same matrix.

Arguments:

XMatrix (Range): Select the cells corresponding to the X (n x p) matrix

XLSTAT_MProduct_XY

Description: Use this function to compute the product of two matrices. The function returns the resulting matrix.

Arguments:

XMatrix (Range): Select the cells corresponding to the X (n x p) matrix

YMatrix (Range): Select the cells corresponding to the Y (p x q) matrix

XLSTAT_MProduct_XtrX

XMatrix (Range): Select the cells corresponding to the input (n x p) matrix

Cumulative Distribution functions

XLSTAT_CDFArcsineG

Description: Use this function to compute the value of the cumulative distribution function at a given value, or for a set of values

Arguments:

iVal (Variant): Value for list of values for which the cumulative distribution function must be computed

a (Double): Value of the a parameter

XLSTAT_CDFBernoulli

Description: Use this function to compute the value of the cumulative distribution function at a given value, or for a set of values

Arguments:

iVal (Variant): Value for list of values for which the cumulative distribution function must be computed

Optional: p (Double, default=0.5): Probability for the event of interest to occur.

XLSTAT_CDFbeta

Description: Use this function to compute the value of the cumulative distribution function at a given value, or for a set of values

Arguments:

iVal (Variant): Value for list of values for which the cumulative distribution function must be computed

alpha (Double): Value of the alpha parameter

beta (Double): Value of the beta parameter

XLSTAT_CDFbeta4

Description: Use this function to compute the value of the cumulative distribution function at a given value, or for a set of values

Arguments:

iVal (Variant): Value for list of values for which the cumulative distribution function must be computed

alpha (Double): Value of the alpha parameter

beta (Double): Value of the beta parameter

c (Double): Value of the c parameter

d (Double): Value of the d parameter

XLSTAT_CDFBinomial

Description: Use this function to compute the value of the cumulative distribution function at a given value, or for a set of values

Arguments:

iVal (Variant): Value for list of values for which the cumulative distribution function must be computed

n (Long): Number of binomial experiments

p (Double): Probability for the event of interest to occur

XLSTAT_CDFBinomialNeg1

Description: Use this function to compute the value of the cumulative distribution function at a given value, or for a set of values. There are two common parametrizations for the negative binomial distribution. With this one, we are looking for the number of failures before n successes are obtained, where the probability of a success is p.

Arguments:

iVal (Variant): Value for list of values for which the cumulative distribution function must be computed

Successes (Long): The number n of successes.

p (Double): The probability of a success.

XLSTAT_CDFBinomialNeg2

Description: Use this function to compute the value of the cumulative distribution function at a given value, or for a set of values

Arguments:

iVal (Variant): Value for list of values for which the cumulative distribution function must be computed

k (Double): Value of the k parameter

p (Double): Value of the p parameter

XLSTAT_CDFChi2

Description: Use this function to compute the value of the cumulative distribution function at a given value, or for a set of values

Arguments:

iVal (Variant): Value for list of values for which the cumulative distribution function must be computed

df (Double): Number of degrees of freedom

XLSTAT_CDFErlang

Description: Use this function to compute the value of the cumulative distribution function at a given value, or for a set of values

Arguments:

iVal (Variant): Value for list of values for which the cumulative distribution function must be computed

k (Long): Value of the k parameter

Lambda (Double): Value of the Lambda parameter

XLSTAT_CDFExponential

Description: Use this function to compute the value of the cumulative distribution function at a given value, or for a set of values

Arguments:

iVal (Variant): Value for list of values for which the cumulative distribution function must be computed

Lambda (Double): Value of the Lambda parameter

XLSTAT_CDFFisher

Description: Use this function to compute the value of the cumulative distribution function at a given value, or for a set of values

Arguments:

iVal (Variant): Value for list of values for which the cumulative distribution function must be computed

df1 (Double): Number of degrees of freedom of the numerator

df2 (Double): Number of degrees of freedom of the denominator

XLSTAT_CDFFisherNC

Description: Use this function to compute the value of the cumulative distribution function at a given value, or for a set of values

Arguments:

iVal (Variant): Value for list of values for which the cumulative distribution function must be computed

df1 (Double): Number of degrees of freedom of the numerator

df2 (Double): Number of degrees of freedom of the denominator

Lambda (Double): Value of the Lambda parameter

Optional: tolerance (Double, default=0.0001): Tolerance parameter

XLSTAT_CDFGamma

Description: Use this function to compute the value of the cumulative distribution function at a given value, or for a set of values

Arguments:

iVal (Variant): Value for list of values for which the cumulative distribution function must be computed

k (Double): Value of the k parameter

beta (Double): Value of the beta parameter

mu (Double): Value of the mu parameter

XLSTAT_CDFFisherTippett

Description: Use this function to compute the value of the cumulative distribution function at a given value, or for a set of values

Arguments:

iVal (Variant): Value for list of values for which the cumulative distribution function must be computed

beta (Double): Value of the beta parameter

mu (Double): Value of the mu parameter

XLSTAT_CDFGEV

Description: Use this function to compute the value of the cumulative distribution function at a given value, or for a set of values

Arguments:

iVal (Variant): Value for list of values for which the cumulative distribution function must be computed

k (Double): Value of the k parameter

beta (Double): Value of the beta parameter

mu (Double): Value of the mu parameter

XLSTAT_CDFNormal

Description: Use this function to compute the value of the cumulative distribution function at a given value, or for a set of values

Arguments:

iVal (Variant): Value for list of values for which the cumulative distribution function must be computed

Optional: mu (Double, default=0): Value of the mu (mean) parameter

Optional: sigma (Double, default=1): Value of the sigma (standard deviation) parameter

XLSTAT_CDFLogNormal

Description: Use this function to compute the value of the cumulative distribution function at a given value, or for a set of values

Arguments:

iVal (Variant): Value for list of values for which the cumulative distribution function must be computed

mu (Double): Value of the mu (location) parameter

sigma (Double): Value of the sigma (scale) parameter

XLSTAT_CDFLogNormal2

Description: Use this function to compute the value of the cumulative distribution function at a given value, or for a set of values

Arguments:

iVal (Variant): Value for list of values for which the cumulative distribution function must be computed

m_log (Double): Value of the m_log (mean) parameter

s_log (Double): Value of the s_log (standard deviation) parameter

XLSTAT_CDFLogistic

Description: Use this function to compute the value of the cumulative distribution function at a given value, or for a set of values

Arguments:

iVal (Variant): Value for list of values for which the cumulative distribution function must be computed

mu (Double): Value of the mu (location) parameter

s (Double): Value of the s (scale) parameter

XLSTAT_CDFPareto

Description: Use this function to compute the value of the cumulative distribution function at a given value, or for a set of values

Arguments:

iVal (Variant): Value for list of values for which the cumulative distribution function must be computed

alpha (Double): Value of the alpha (shape) parameter

xm (Double): Value of the xm (scale) parameter

XLSTAT_CDFPert

Description: Use this function to compute the value of the cumulative distribution function at a given value, or for a set of values

Arguments:

iVal (Variant): Value for list of values for which the cumulative distribution function must be computed

min (Double): Minimum value of the distribution

mode (Double): Mode of the distribution

max (Double): Maximum of the distribution

XLSTAT_CDFPoisson

Description: Use this function to compute the value of the cumulative distribution function at a given value, or for a set of values

Arguments:

iVal (Variant): Value for list of values for which the cumulative distribution function must be computed

Lambda (Double): Value of the Lambda parameter

XLSTAT_CDFStudent

Description: Use this function to compute the value of the cumulative distribution function at a given value, or for a set of values

Arguments:

iVal (Variant): Value for list of values for which the cumulative distribution function must be computed

df (Double): Number of degrees of freedom

XLSTAT_CDFStudentizedRange

Description: Use this function to compute the value of the cumulative distribution function at a given value, or for a set of values

Arguments:

iVal (Variant): Value for list of values for which the cumulative distribution function must be computed

k (Double): Value of the k parameter

df (Double): Number of degrees of freedom

XLSTAT_CDFStudentNC

Description: Use this function to compute the value of the cumulative distribution function at a given value, or for a set of values

Arguments:

iVal (Variant): Value for list of values for which the cumulative distribution function must be computed

df (Double): Number of degrees of freedom

mu (Double): Value of the mu (location) parameter

XLSTAT_CDFTrapezoidal

Description: Use this function to compute the value of the cumulative distribution function at a given value, or for a set of values

Arguments:

iVal (Variant): Value for list of values for which the cumulative distribution function must be computed

a (Double): Value of the a (minimum) parameter

b (Double): Value of the c (mode lowest) parameter

c (Double): Value of the c (mode highest) parameter

d (Double): Value of the d (maximum) parameter

XLSTAT_CDFTriangular

Description: Use this function to compute the value of the cumulative distribution function at a given value, or for a set of values

Arguments:

iVal (Variant): Value for list of values for which the cumulative distribution function must be computed

a (Double): Value of the a (minimum) parameter

mode (Double): Value of the mode parameter

b (Double): Value of the a (maximum) parameter

XLSTAT_CDFTriangularQ

Description: Use this function to compute the value of the cumulative distribution function at a given value, or for a set of values

Arguments:

iVal (Variant): Value for list of values for which the cumulative distribution function must be computed

q1 (Double): Value of the first quantile

mode (Double): Value of the mode parameter

q2 (Double): Value of the second quantile

pr1 (Double): Probability of the first quantile

pr2 (Double): Probability of the second quantile

XLSTAT_CDFUniform

Description: Use this function to compute the value of the cumulative distribution function at a given value, or for a set of values

Arguments:

iVal (Variant): Value for list of values for which the cumulative distribution function must be computed

a (Double, default=0): Value of the a (minimum) parameter

b (Double, default=1): Value of the b (maximum) parameter

XLSTAT_CDFUniformDisc

Description: Use this function to compute the value of the cumulative distribution function at a given value, or for a set of values

Arguments:

iVal (Variant): Value for list of values for which the cumulative distribution function must be computed

a (Long): Value of the a (minimum) parameter

b (Long): Value of the b (maximum) parameter

XLSTAT_CDFWeibull

Description: Use this function to compute the value of the cumulative distribution function at a given value, or for a set of values

Arguments:

iVal (Variant): Value for list of values for which the cumulative distribution function must be computed

beta (Double): Value of the beta parameter

Optional: gamma (Double, default=1): Value of the gamma parameter

Optional: mu (Double, default=0): Value of the mu (location) parameter

Inverse distribution functions

XLSTAT_InvCDFArcsineG

Description: Use this function to compute the inverse distribution function for one or more input probabilities.

Arguments:

prob (Variant): Probability or list of probabilities for which the inverse distribution function must be computed. The values must belong to [0, 1]

a (Double): Value of the a parameter

XLSTAT_InvCDFBernoulli

Description: Use this function to compute the inverse distribution function for one or more input probabilities.

Arguments:

prob (Variant): Probability or list of probabilities for which the inverse distribution function must be computed. The values must belong to [0, 1]

Optional: p (Double, default=0.5): Probability for the event of interest to occur.

XLSTAT_InvCDFbeta

Description: Use this function to compute the inverse distribution function for one or more input probabilities.

Arguments:

prob (Variant): Probability or list of probabilities for which the inverse distribution function must be computed. The values must belong to [0, 1]

alpha (Double): Value of the alpha parameter

beta (Double): Value of the beta parameter

XLSTAT_InvCDFbeta4

Description: Use this function to compute the inverse distribution function for one or more input probabilities.

Arguments:

prob (Variant): Probability or list of probabilities for which the inverse distribution function must be computed. The values must belong to [0, 1]

alpha (Double): Value of the alpha parameter

beta (Double): Value of the beta parameter

c (Double): Value of the c parameter

d (Double): Value of the d parameter

XLSTAT_InvCDFBinomial

Description: Use this function to compute the inverse distribution function for one or more input probabilities.

Arguments:

prob (Variant): Probability or list of probabilities for which the inverse distribution function must be computed. The values must belong to [0, 1]

n (Long): Number of binomial experiments

p (Double): Probability for the event of interest to occur

XLSTAT_InvCDFBinomialNeg1

Description: Use this function to compute the inverse distribution function for one or more input probabilities. There are two common parametrizations for the negative binomial distribution. With this one, we are looking for the number of failures before n successes are obtained, where the probability of a success is p.

Arguments:

prob (Variant): Probability or list of probabilities for which the inverse distribution function must be computed. The values must belong to [0, 1]

Successes (Long): The number n of successes.

p (Double): The probability of a success.

XLSTAT_InvCDFBinomialNeg2

Description: Use this function to compute the inverse distribution function for one or more input probabilities.

Arguments:

prob (Variant): Probability or list of probabilities for which the inverse distribution function must be computed. The values must belong to [0, 1]

k (Double): Value of the k parameter

p (Double): Value of the p parameter

XLSTAT_InvCDFChi2

Description: Use this function to compute the inverse distribution function for one or more input probabilities.

Arguments:

prob (Variant): Probability or list of probabilities for which the inverse distribution function must be computed. The values must belong to [0, 1]

df (Double): Number of degrees of freedom

XLSTAT_InvCDFErlang

Description: Use this function to compute the inverse distribution function for one or more input probabilities.

Arguments:

prob (Variant): Probability or list of probabilities for which the inverse distribution function must be computed. The values must belong to [0, 1]

k (Long): Value of the k parameter

Lambda (Double): Value of the Lambda parameter

XLSTAT_InvCDFExponential

Description: Use this function to compute the inverse distribution function for one or more input probabilities.

Arguments:

prob (Variant): Probability or list of probabilities for which the inverse distribution function must be computed. The values must belong to [0, 1]

Lambda (Double): Value of the Lambda parameter

XLSTAT_InvCDFFisher

Description: Use this function to compute the inverse distribution function for one or more input probabilities.

Arguments:

prob (Variant): Probability or list of probabilities for which the inverse distribution function must be computed. The values must belong to [0, 1]

df1 (Double): Number of degrees of the denominator

df2 (Double): Number of degrees of the numerator

XLSTAT_InvCDFGamma

Description: Use this function to compute the inverse distribution function for one or more input probabilities.

Arguments:

prob (Variant): Probability or list of probabilities for which the inverse distribution function must be computed. The values must belong to [0, 1]

k (Double): Value of the k parameter

Optional: beta (Double, default=1): Value of the beta parameter

Optional: mu (Double, default=0): Value of the mu parameter

XLSTAT_InvCDFFisherTippett

Description: Use this function to compute the inverse distribution function for one or more input probabilities.

Arguments:

prob (Variant): Probability or list of probabilities for which the inverse distribution function must be computed. The values must belong to [0, 1]

Optional: beta (Double, default=1) Value of the beta parameter:

Optional: mu (Double, default=0): Value of the mu parameter

XLSTAT_InvCDFGEV

Description: Use this function to compute the inverse distribution function for one or more input probabilities.

Arguments:

prob (Variant): Probability or list of probabilities for which the inverse distribution function must be computed. The values must belong to [0, 1]

k (Double): Value of the k parameter

beta (Double): Value of the beta parameter

mu (Double): Value of the mu parameter

XLSTAT_InvCDFLogNormal

Description: Use this function to compute the inverse distribution function for one or more input probabilities.

Arguments:

prob (Variant): Probability or list of probabilities for which the inverse distribution function must be computed. The values must belong to [0, 1]

mu (Double): Value of the mu (location) parameter

sigma (Double): Value of the sigma (scale) parameter

XLSTAT_InvCDFLogNormal2

Description: Use this function to compute the inverse distribution function for one or more input probabilities.

Arguments:

prob (Variant): Probability or list of probabilities for which the inverse distribution function must be computed. The values must belong to [0, 1]

m_log (Double): Value of the m_log (mean) parameter

s_log (Double): Value of the s_log (standard deviation) parameter

XLSTAT_InvCDFLogistic

Description: Use this function to compute the inverse distribution function for one or more input probabilities.

Arguments:

prob (Variant): Probability or list of probabilities for which the inverse distribution function must be computed. The values must belong to [0, 1]

Optional: mu (Double, default=0): Value of the mu (location) parameter

Optional: sigma (Double, default=1): Value of the sigma (scale) parameter

XLSTAT_InvCDFNormal

Description: Use this function to compute the inverse distribution function for one or more input probabilities.

Arguments:

prob (Variant): Probability or list of probabilities for which the inverse distribution function must be computed. The values must belong to [0, 1]

Optional: mu (Double, default=0): Value of the mu (mean) parameter

Optional: sigma (Double, default=1): Value of the sigma (standard deviation) parameter

XLSTAT_InvCDFPareto

Description: Use this function to compute the inverse distribution function for one or more input probabilities.

Arguments:

prob (Variant): Probability or list of probabilities for which the inverse distribution function must be computed. The values must belong to [0, 1]

alpha (Double): Value of the alpha (shape) parameter

xm (Double): Value of the xm (scale) parameter

XLSTAT_InvCDFPert

Description: Use this function to compute the inverse distribution function for one or more input probabilities.

Arguments:

prob (Variant): Probability or list of probabilities for which the inverse distribution function must be computed. The values must belong to [0, 1]

min (Double): Value of the min (minimum) parameter

mode (Double): Value of the mode parameter

max (Double): Value of the max (maximum) parameter

XLSTAT_InvCDFPoisson

Description: Use this function to compute the inverse distribution function for one or more input probabilities.

Arguments:

prob (Variant): Probability or list of probabilities for which the inverse distribution function must be computed. The values must belong to [0, 1]

Lambda (Double): Value of the Lambda parameter

XLSTAT_InvCDFStudent

Description: Use this function to compute the inverse distribution function for one or more input probabilities.

Arguments:

prob (Variant): Probability or list of probabilities for which the inverse distribution function must be computed. The values must belong to [0, 1]

df (Double): Number of degrees of freedom

XLSTAT_InvCDFStudentizedRange

Description: Use this function to compute the inverse distribution function for one or more input probabilities.

Arguments:

prob (Variant): Probability or list of probabilities for which the inverse distribution function must be computed. The values must belong to [0, 1]

k (Double): Value of the k parameter

df (Double): Number of degrees of freedom

XLSTAT_InvCDFStudentNC

Description: Use this function to compute the inverse distribution function for one or more input probabilities.

Arguments:

prob (Variant): Probability or list of probabilities for which the inverse distribution function must be computed. The values must belong to [0, 1]

df (Double): Number of degrees of freedom

mu (Double): Value of the mu (location) parameter

XLSTAT_InvCDFTrapezoidal

Description: Use this function to compute the inverse distribution function for one or more input probabilities.

Arguments:

prob (Variant): Probability or list of probabilities for which the inverse distribution function must be computed. The values must belong to [0, 1]

a (Double): Value of the a (minimum) parameter

b (Double): Value of the c (mode lowest) parameter

c (Double): Value of the c (mode highest) parameter

d (Double): Value of the d (maximum) parameter

XLSTAT_InvCDFTriangular

Description: Use this function to compute the inverse distribution function for one or more input probabilities.

Arguments:

prob (Variant): Probability or list of probabilities for which the inverse distribution function must be computed. The values must belong to [0, 1].

a (Double): Value of the minimum parameter.

Mode (Double): Value of the mode parameter.

b (Double): Value of the maximum parameter.

XLSTAT_InvCDFTriangularQ

Description: Use this function to compute the inverse distribution function for one or more input probabilities.

Arguments:

prob (Variant): Probability or list of probabilities for which the inverse distribution function must be computed. The values must belong to [0, 1]

q1 (Double): Value of the first quantile

Mode (Double): Value of the mode parameter

q2 (Double): Value of the second quantile

pr1 (Double): Probability of the first quantile

pr2 (Double): Probability of the second quantile

XLSTAT_InvCDFUniform

Description: Use this function to compute the inverse distribution function for one or more input probabilities.

Arguments:

prob (Variant): Probability or list of probabilities for which the inverse distribution function must be computed. The values must belong to [0, 1]

a (Double, default=0): Value of the a (minimum) parameter

b (Double, default=1): Value of the b (maximum) parameter

XLSTAT_InvCDFUniformDisc

Description: Use this function to compute the inverse distribution function for one or more input probabilities.

Arguments:

prob (Variant): Probability or list of probabilities for which the inverse distribution function must be computed. The values must belong to [0, 1]

a (Long): Value of the a (minimum) parameter

b (Long): Value of the b (maximum) parameter

XLSTAT_InvCDFWeibull

Description: Use this function to compute the inverse distribution function for one or more input probabilities.

Arguments:

prob (Variant): Probability or list of probabilities for which the inverse distribution function must be computed. The values must belong to [0, 1]

beta (Double): Value of the beta parameter

Optional: gamma (Double, default=1): Value of the gamma parameter

Optional: mu (Double, default=0): Value of the mu (location) parameter

Probability density functions

XLSTAT_PDFArcsineG

Description: Use this function to compute the value of the probability density function at a given value, or for a set of values

Arguments:

iVal (Variant): Value or list of values for which the probability density function must be computed

a (Double): Value of the a (shape) parameter

XLSTAT_PDFBernoulli

Description: Use this function to compute the value of the probability density function at a given value, or for a set of values

Arguments:

iVal (Variant): Value or list of values for which the probability density function must be computed

Optional: p (Double, default=0.5): Probability for the event of interest to occur.

XLSTAT_PDFbeta

Description: Use this function to compute the value of the probability density function at a given value, or for a set of values

Arguments:

iVal (Variant): Value or list of values for which the probability density function must be computed

alpha (Double): Value of the alpha parameter

beta (Double): Value of the beta parameter

XLSTAT_PDFbeta4

Description: Use this function to compute the value of the probability density function at a given value, or for a set of values

Arguments:

iVal (Variant): Value or list of values for which the probability density function must be computed

alpha (Double): Value of the alpha parameter

beta (Double): Value of the beta parameter

c (Double): Value of the c parameter

d (Double): Value of the d parameter

XLSTAT_PDFBinomial

Description: Use this function to compute the value of the probability density function at a given value, or for a set of values

Arguments:

iVal (Variant): Value or list of values for which the probability density function must be computed

n (Long): Number of binomial experiments

p (Double): Probability for the event of interest to occur

XLSTAT_PDFBinomialNeg1

Description: Use this function to compute the value of the probability density function at a given value, or for a set of values. There are two common parametrizations for the negative binomial

distribution. With this one, we are looking for the number of failures before n successes are obtained, where the probability of a success is p .

Arguments:

iVal (Variant): Value or list of values for which the probability density function must be computed

Successes (Long): The number n of successes.

p (Double): The probability of a success.

XLSTAT_PDFBinomialNeg2

Description: Use this function to compute the value of the probability density function at a given value, or for a set of values

Arguments:

iVal (Variant): Value or list of values for which the probability density function must be computed

k (Double): Value of the k parameter

p (Double): Value of the p parameter

XLSTAT_PDFChi2

Description: Use this function to compute the value of the probability density function at a given value, or for a set of values

Arguments:

iVal (Variant): Value or list of values for which the probability density function must be computed

df (Double): Number of degrees of freedom

XLSTAT_PDFErlang

Description: Use this function to compute the value of the probability density function at a given value, or for a set of values

Arguments:

iVal (Variant): Value or list of values for which the probability density function must be computed

k (Long): Value of the k parameter

Lambda (Double): Value of the Lambda parameter

XLSTAT_PDFExponential

Description: Use this function to compute the value of the probability density function at a given value, or for a set of values

Arguments:

iVal (Variant): Value or list of values for which the probability density function must be computed

Lambda (Double): Value of the Lambda parameter

XLSTAT_PDFFisher

Description: Use this function to compute the value of the probability density function at a given value, or for a set of values

Arguments:

iVal (Variant): Value or list of values for which the probability density function must be computed

df1 (Double): Number of degrees of freedom of the numerator

df2 (Double): Number of degrees of freedom of the denominator

XLSTAT_PDFGamma

Description: Use this function to compute the value of the probability density function at a given value, or for a set of values

Arguments:

iVal (Variant): Value or list of values for which the probability density function must be computed

k (Double): Value of the k parameter

Optional: beta (Double, default=1): Value of the beta parameter

Optional: mu (Double, default=0): Value of the mu (location) parameter

XLSTAT_PDFFisherTippett

Description: Use this function to compute the value of the probability density function at a given value, or for a set of values

Arguments:

iVal (Variant): Value or list of values for which the probability density function must be computed

Optional: beta (Double, default=1): Value of the beta parameter

Optional: mu (Double, default=0): Value of the mu (position) parameter

XLSTAT_PDFGEV

Description: Use this function to compute the value of the probability density function at a given value, or for a set of values

Arguments:

iVal (Variant): Value or list of values for which the probability density function must be computed

k (Double): Value of the k parameter

beta (Double): Value of the beta parameter

mu (Double): Value of the mu (location) parameter

XLSTAT_PDFNormal

Description: Use this function to compute the value of the probability density function at a given value, or for a set of values

Arguments:

iVal (Variant): Value or list of values for which the probability density function must be computed

Optional: mu (Double, default=0): Value of the mu (mean) parameter

Optional: sigma (Double, default=1): Value of the sigma (standard deviation) parameter

XLSTAT_PDFLogNormal

Description: Use this function to compute the value of the probability density function at a given value, or for a set of values

Arguments:

iVal (Variant): Value or list of values for which the probability density function must be computed

mu (Double): Value of the mu (location) parameter

sigma (Double): Value of the sigma (scale) parameter

XLSTAT_PDFLogNormal2

Description: Use this function to compute the value of the probability density function at a given value, or for a set of values

Arguments:

iVal (Variant): Value or list of values for which the probability density function must be computed

m_log (Double): Value of the m_log (mean) parameter

s_log (Double): Value of the s_log (standard deviation) parameter

XLSTAT_PDFLogistic

Description: Use this function to compute the value of the probability density function at a given value, or for a set of values

Arguments:

iVal (Variant): Value or list of values for which the probability density function must be computed

mu (Double): Value of the mu (location) parameter

s (Double): Value of the s (scale) parameter

XLSTAT_PDFPareto

Description: Use this function to compute the value of the probability density function at a given value, or for a set of values

Arguments:

iVal (Variant): Value or list of values for which the probability density function must be computed

alpha (Double): Value of the alpha (shape) parameter

xm (Double): Value of the xm (scale) parameter

XLSTAT_PDFPert

Description: Use this function to compute the value of the probability density function at a given value, or for a set of values

Arguments:

iVal (Variant): Value or list of values for which the probability density function must be computed

min (Double): Value of the min (minimum) parameter

mode (Double): Value of the mode parameter

max (Double): Value of the max (maximum) parameter

XLSTAT_PDFPoisson

Description: Use this function to compute the value of the probability density function at a given value, or for a set of values

Arguments:

iVal (Variant): Value or list of values for which the probability density function must be computed

Lambda (Double): Value of the Lambda parameter

XLSTAT_PDFStudent

Description: Use this function to compute the value of the probability density function at a given value, or for a set of values

Arguments:

iVal (Variant): Value or list of values for which the probability density function must be computed

df (Double): Number of degrees of freedom

XLSTAT_PDFStudentNC

Description: Use this function to compute the value of the probability density function at a given value, or for a set of values

Arguments:

iVal (Variant): Value or list of values for which the probability density function must be computed

df (Double): Number of degrees of freedom

mu (Double): Value of the mu (location) parameter

XLSTAT_PDFTrapezoidal

Description: Use this function to compute the value of the probability density function at a given value, or for a set of values

Arguments:

iVal (Variant): Value or list of values for which the probability density function must be computed

a (Double): Value of the a (minimum) parameter

b (Double): Value of the c (mode lowest) parameter

c (Double): Value of the c (mode highest) parameter

d (Double): Value of the d (maximum) parameter

XLSTAT_PDFTriangular

Description: Use this function to compute the value of the probability density function at a given value, or for a set of values

Arguments:

iVal (Variant): Value or list of values for which the probability density function must be computed

a (Double): Value of the a (minimum) parameter

mode (Double): Value of the mode parameter

b (Double): Value of the b (maximum) parameter

XLSTAT_PDFTriangularQ

Description: Use this function to compute the value of the probability density function at a given value, or for a set of values

Arguments:

iVal (Variant): Value or list of values for which the probability density function must be computed

q1 (Double): Value of the first quantile

mode (Double): Value of the mode parameter

q2 (Double): Value of the second quantile

pr1 (Double): Probability of the first quantile

pr2 (Double): Probability of the second quantile

XLSTAT_PDFUniform

Description: Use this function to compute the value of the probability density function at a given value, or for a set of values

Arguments:

iVal (Variant): Value or list of values for which the probability density function must be computed

a (Double, default=0): Value of the a (minimum) parameter

b (Double, default=1): Value of the b (maximum) parameter

XLSTAT_PDFUniformDisc

Description: Use this function to compute the value of the probability density function at a given value, or for a set of values

Arguments:

iVal (Variant): Value or list of values for which the probability density function must be computed

a (Long): Value of the a (minimum) parameter

b (Long): Value of the b (maximum) parameter

XLSTAT_PDFWeibull

Description: Use this function to compute the value of the probability density function at a given value, or for a set of values

Arguments:

iVal (Variant): Value or list of values for which the probability density function must be computed

beta (Double, default=0): Value of the beta parameter

Optional: gamma (Double, default=1): Value of the gamma parameter

Optional: mu (Double, default=0): Value of the mu (location) parameter