

timeSeries

Rmetrics Reference Card

The functions listed in this reference card are available from the CRAN server, its development version from the r-forge Server.

Time Series Functions:

timeSeries-.R*

timeSeries	Generates a signal or timeSeries from scratch
dummy	
dummySeries	Creates a dummy monthly timeSeries object
dummyDailySeries	Creates a dummy daily timeSeries object
getDataPart	Extracts data slot from a timeSeries object
setDataPart	Assigns data slot of a timeSeries object
isOHLCL	
.isOHLCL	Tests if a series has Open-High-Low-Close columns
.isOHLCLV	Tests if a series has Open-High-Low-Close-Volume
isRegular	Tests if a time series is a regular series
isDaily	Tests if a timeSeries is a daily series
isMonthly	Tests if a timeSeries is a monthly series
isQuarterly	Tests if a timeSeries is a quarterly series
frequency	Returns the frequency of a regular time series
isUnivariate	Tests if a timeSeries object is univariate
isMultivariate	Tests if a timeSeries object is multivariate
readSeries	Reads a CSV file and creates a timeSeries
signalCounts	
.signalCounts	Creates charvec for integer indexed time stamps
slotFinCenter	
finCenter	Extracts financial center slot from a timeSeries
finCenter<-	Assigns financial center slot from a timeSeries
getFinCenter	Extracts financial center slot from a timeSeries
setFinCenter<-	Assigns new financial center slot from a timeSeries
slotSeries	
series	Extracts data slot from a timeSeries object
series<-	Assigns new data slot to a timeSeries object
getSeries	Extracts data slot from a timeSeries object
setSeries<-	Assigns new data slot to a timeSeries object
slotTime	
time	Extracts time stamps from a timeSeries object
time<-	Assigns time samps to a timeSeries object
getTime	Extracts time stamps from a timeSeries object
setTime<-	Assigns time samps to a timeSeries object
slotUnits	
getUnits	Extracts units slot from a timeSeries
setUnits<-	Assigns new units slot to a timeSeries

Base Time Series Functions:

base-.R*

<code>apply</code>	Applies a function to blocks of a timeSeries
<code>attach</code>	Attaches a timeSeries to the search path
<code>cbind</code>	Binds columns of two timeSeries objects
<code>rbind</code>	Binds rows of two timeSeries objects
<code>comment</code>	Returns documentation slot of a time series
<code>diff</code>	Differences a timeSeries object
<code>dim</code>	Returns dimension of a timeSeries object
<code>dim<=</code>	Assigns dimension of a timeSeries object
<code>dimnames</code>	Returns dimension names of a time series
<code>dimnames=</code>	Assigns dimension names of a timeSeries object
<code>colnames</code>	Returns column names to a timeSeries object
<code>rownames</code>	Returns row names to a timeSeries object
<code>colnames<=</code>	Assigns column names to a timeSeries object
<code>rownames<=</code>	Assigns row names to a timeSeries object
<code>names</code>	Returns column names of a timeSeries object
<code>names<=</code>	Assigns column names of a timeSeries object
<code>merge</code>	Merges two timeSeries objects
<code>rank</code>	Returns sample ranks of a timeSeries object
<code>rev</code>	Reverts a time series in the time stamps
<code>sample</code>	Resamples a time series in its time stamps
<code>scale</code>	Centers and/or scales a timeSeries object
<code>sort</code>	Sorts a time series in its time stamps
<code>start</code>	Extracts start date of a timeSeries object
<code>end</code>	Extracts end date of a timeSeries object

Subsetting:

base-.R:*

<code>subset</code>	Subsets timeSeries objects
<code>.subset_</code>	Index search
<code>.findIndex</code>	Subsets a timeSeries object
<code>[</code>	Assigns value to subsets of a time series
<code>\$</code>	Subsets a time series by column names
<code>\$<-</code>	Replaces subset by column names
<code>t</code>	Returns the transpose of a timeSeries object

Methods:

methods-.R*

<code>as.timeSeries</code>	Defines method for a timeSeries object
<code>as.*.default</code>	Returns the input
<code>as.*.ts</code>	Transforms a 'data.frame' into a timeSeries
<code>as.*.data.frame</code>	Transforms a 'data.frame' into a timeSeries
<code>a.s*.character</code>	Loads and transforms from a demo file
<code>as.*.zoo</code>	Transforms a 'zoo' object into a timeSeries
<code>as.vector.*</code>	Converts a univariate timeSeries to a vector
<code>as.matrix.*</code>	Converts a timeSeries to a 'matrix'
<code>as.numeric.*</code>	Converts a timeSeries to a 'numeric'
<code>as.data.frame.*</code>	Converts a timeSeries to a 'data.frame'
<code>as.ts.*</code>	Converts a timeSeries to a 'ts'
<code>as.ts.logical</code>	Converts a timeSeries to 'logical'
<code>as.list.*</code>	Converts a timeSeries to 'list'
<code>comment</code>	Gets documentation slot of a timeSeries object
<code>comment<-</code>	Set documentation slot of a timeSeries object
<code>is</code>	
<code>is.timeSeries</code>	Tests for a timeSeries object
<code>mathops</code>	
<code>Ops,timeSeries</code>	Returns group 'Ops' for a timeSeries object
<code>cummax</code>	Returns cumulated maxima from a timeSeries
<code>cumin</code>	Returns cumulated minima from a timeSeries
<code>cumprod</code>	Returns cumulated products from a timeSeries
<code>cumsum</code>	Returns cumulated sums from a timeSeries
<code>quantile</code>	Returns sample quantile of a timeSeries
<code>plot</code>	Plots a timeSeries object
<code>lines</code>	Adds lines to a timeSeries plot
<code>points</code>	Adds points to a timeSeries plot
<code>show</code>	Prints a timeSeries object
<code>print</code>	Prints a timeSeries object

Statistics Time Series Functions:

statistics-.R*

<code>colCumsums</code>	Computes cumulated sums of a timeSeries by column
<code>colCummaxs</code>	Computes cumulated maximum values by column
<code>colCummins</code>	Computes cumulated minimum values by column
<code>colCumprods</code>	Computes cumulated product values by column
<code>colCumreturns</code>	Computes cumulated product values by column
<code>colSums</code>	Computes sums of all values in each column
<code>colMeans</code>	Computes means of all values in each column
<code>colSds</code>	Computes standard deviation of each column
<code>colVars</code>	Computes sample variance by column
<code>colSkewness</code>	Computes sample skewness by column
<code>colKurtosis</code>	Computes sample kurtosis by column
<code>colMaxs</code>	Computes maximum values in each column
<code>colMins</code>	Computes minimum values in each column
<code>colProds</code>	Computes product of all values in each column
<code>colStats</code>	Computes sample statistics by column
<code>orderColnames</code>	Returns ordered column names of a timeSeries
<code>sortColnames</code>	Returns sorted column names of a timeSeries
<code>sampleColnames</code>	Returns sampled column names of a timeSeries
<code>pcaColnames</code>	Returns PCA correlation ordered column names
<code>hclustColnames</code>	Returns hierarchical clustered column names
<code>statsColnames</code>	Returns statistically rearranged column names
<code>orderStatistics</code>	Computes order statistics of a timeSeries
<code>rollMean</code>	Computes rolling mean of a timeSeries
<code>rollMin</code>	Computes rolling minimum of a timeSeries
<code>rollMax</code>	Computes rolling maximum of a timeSeries
<code>rollMedian</code>	Computes rolling median of a timeSeries
<code>rollStats</code>	Computes rolling statistics of a timeSeries
<code>rowCumsums</code>	Computes cumulated sums of a time series by row
<code>smoothLowess</code>	Smooths a series with lowess function
<code>smoothSupsmu</code>	Smooths a series with supsmu function
<code>smoothSpline</code>	Smooths a series with smooth.spline function

Financial Time Series Functions:

fin-.R:*

<code>align</code>	Aligns a time series to time stamps
<code>Cumulated</code>	Computes cumulated series from financial returns
<code>daily</code>	
<code>alignDailySeries</code>	Aligns a time series to new positions
<code>rollDailySeries</code>	Rolls daily a timeSeries on a given period
<code>drawdowns</code>	Generates a time series of drawdown levels
<code>drawdownsStats</code>	Computes drawdown statistics from a timeSeries
<code>durations</code>	Computes durations from a timeSeries
<code>monthly</code>	
<code>countMonthlyRecords</code>	Returns a series with monthly counts of records
<code>rollMonthlyWindows</code>	Returns start/end dates for rolling time windows
<code>rollMonthlySeries</code>	Rolls Monthly a timeSeries on a given period
<code>periodical</code>	
<code>.endOfPeriodSeries</code>	Returns series back to a given period
<code>.endOfPeriodStats</code>	Returns statistics back to a given period
<code>.endOfPeriodBenchmarks</code>	Returns benchmarks back to a given period
<code>returns</code>	Computes returns from a index/price/value series
<code>runlengths</code>	Returns a timeSeries of runlengths
<code>splits</code>	
<code>outlier</code>	Detects timeSeries splits by outlier detection
<code>spreads</code>	Computes spreads between bivariate timeSeries
<code>midquotes</code>	Computes mid quotes of bivariate timeSeries
<code>turnpoints</code>	
<code>turns</code>	Returns peaks and pits from a timeSeries
<code>turnsStats</code>	Computes turnpoints statistics for a timeSeries

Misc. Time Series Functions:

stats-.R:*

<code>aggregate</code>	Aggregates a time series by calendrical blocks
<code>filter</code>	Applies linear filtering to a timeSeries
<code>lag</code>	Computes a lagged version of a timeSeries
<code>na.contiguous</code>	Finds longest consecutive of non-missing values
<code>na.omit</code>	Handles missing values in a timeSeries
<code>window</code>	Subtracts a piece or a window from a timeSeries

Utility Functions:

utils-.R:*

<code>Description</code>	Sets default description string
<code>getArgs</code>	Extracts arguments from a timeSeries function
<code>head</code>	Returns the head of a timeSeries object
<code>tail</code>	Returns the tail of a timeSeries object
<code>str</code>	Displays the structure of a timeSeries object