

NDK_AVERAGE

Last Modified on 04/28/2016 11:50 am CDT

- C/C++
- .Net

```
int __stdcall NDK_AVERAGE(double * X,  
                           size_t  N,  
                           WORD    reserved,  
                           double * retVal  
                           )
```

Calculates the sample average.

Returns

status code of the operation

Return values

NDK_SUCCESS Operation successful

NDK_FAILED Operation unsuccessful. See [Macros](#) for full list.

Parameters

[in] **X** is the input data sample (a one dimensional array).

[in] **N** is the number of observations in X.

[in] **reserved** This parameter is reserved and must be 1.

[out] **retVal** is the calculated average value.

Remarks

- The input data sample may include missing values (NaN), but they will not be included in the calculation.
- The average is defined as follow:

$$\bar{x} = \frac{\sum_{i=1}^N x_i}{N}$$

Requirements

Header	SFSDK.H
Library	SFSDK.LIB
DLL	SFSDK.DLL

Examples

```
#include "SFMacros.h"
#include "SFSDK.h"

double data[10]={12.0, 13.0, 15.0, 11.5, 12.5, 17.0, 16.0, 18.9, 9.0, 15.0};

double retVal = -1.0
nRet = NDK_AVERAGE(data,10, 1, &retVal );
if( nRet <h; NDK_SUCCESS){
    // Error occurred
    // Call NDK_MSG() to get the error message, and write it to the log
}
}
```

```
int NDK_AVERAGE(double    pData,
                 UIntPtr  nSize,
                 short     argMethod,
                 ref double retVal
                 )
```

Namespace: NumXLAPI
Class: SFSDK
Scope: Public
Lifetime: Static

Calculates the sample average.

Return Value

a value from [NDK_RETCODE](#) enumeration for the status of the call.

NDK_SUCCESS operation successful

Error Error Code

Parameters

[in] **pData** is the input data sample (a one dimensional array).

[in] **nSize** is the number of observations in pData.

[in] **argMethod** This parameter is reserved and must be 1.

[out] **retVal** is the calculated average value.

Remarks

- The input data sample may include missing values (NaN), but they will not be included in the calculation.
- The average is defined as follow:

$$\bar{x} = \frac{\sum_{i=1}^N x_i}{N}$$

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double retVal = -1.0
nRet = NDK_AVERAGE(data,10, 1, &retVal );
if( nRet <h; NDK_SUCCESS){
    // Error ocured
    // Call NDK_MSG() to get the error message, and write it to the log
}
```

Exceptions

Exception Type	Condition
None	N/A

Requirements

Namespace	NumXLAPI
Class	SFSDK
Scope	Public

Lifetime	Static
Package	NumXLAPI.DLL

Examples

References

- Hamilton, J .D.; [Time Series Analysis](#) , Princeton University Press (1994), ISBN 0-691-04289-6
- Tsay, Ruey S.; [Analysis of Financial Time Series](#) John Wiley & SONS. (2005), ISBN 0-471-690740

See Also

[template("related")]
