

NDK_IQR

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- C/C++
- .Net

```
int __stdcall NDK_IQR(double * X,  
                    size_t  N,  
                    double * retVal  
                    )
```

Returns the inter quartile range (IQR), also called the mid-spread or middle fifty.

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.

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

Note

1. The input time series data may include missing values (NaN), but they will not be included in the calculations.

2. The interquartile range is defined as follows:

$$\mathrm{IQR} = Q_3 - Q_1$$

where

- Q_3 is the third quartile.
- Q_1 is the first quartile.

3. Interquartile range (IQR) is a robust statistic because it has a break down point of 25%. It is often preferred to the total range.

Requirements

Header	SFSDK.H
Library	SFSDK.LIB

DLL	SFSDK.DLL
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Examples

```
int NDK_IQR(double[] pData,  
            UIntPtr nSize,  
            ref double retVal  
            )
```

Namespace: NumXLAPI

Class: SFSDK

Scope: Public

Lifetime: Static

Returns the inter quartile range (IQR), also called the mid-spread or middle fifty.

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.

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

Remarks

1. The input time series data may include missing values (NaN), but they will not be included in the calculations.

2. The interquartile range is defined as follows:

$$\mathrm{IQR} = Q_3 - Q_1$$

where

- Q_3 is the third quartile.
- Q_1 is the first quartile.

3. Interquartile range (IQR) is a robust statistic because it has a break down point of 25%. It is often preferred to the total range.

Exceptions

Exception Type	Condition

None	N/A
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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")]
