Kurtosis

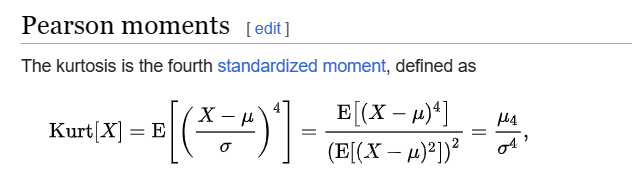
Def

=

where

is standard random variable of

=



Property

Inequality

where

is 4th central moment

is 3th central moment

Proof:

Sum

=

=

+

+

+

Proof:

=

=

=

Now, let’s evaluate this term first,

=

=

+

+

+

+

With definition of Kurtosis and Cokurtosis, we can imply 1th term to.

=

=

=

To do so for all terms, we have that

=

+

+

+

+

Then the expression

will be

=

where

is defined above.

Hence proved.

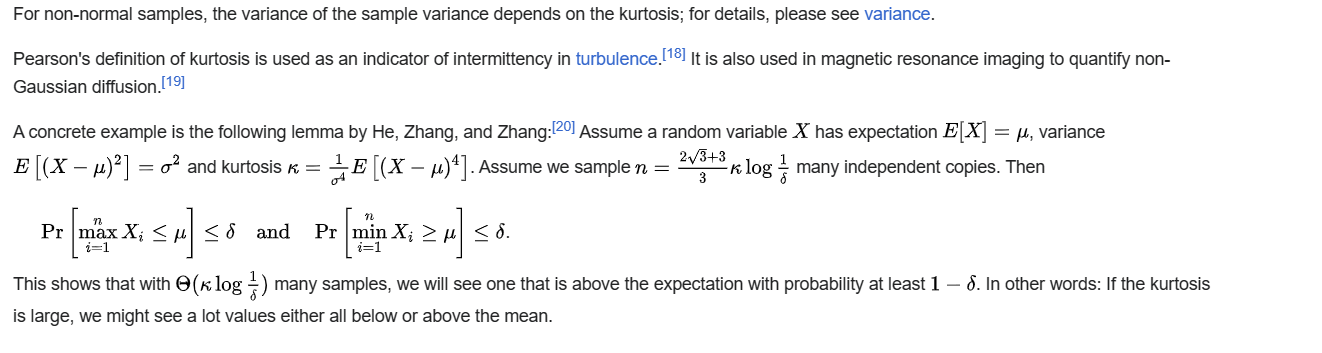
Fisher’s Kurtosis

If Kurtosis is about Fisher’s, it is decreased by 3.

=

Annotation

Complexity



Ref

[Kurtosis - Wikipedia](https://en.wikipedia.org/wiki/Kurtosis#Excess_kurtosis)