**Normalized Sigmoid Function**

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I referred to the site:

https://dinodini.wordpress.com/2010/04/05/normalized-tunable-sigmoid-functions/

The default curve is , where is a constant. The following curves are the curves according to , where varies 0.0 to 1.0, and accordingly also moves 0.0 to 1.0.







We wanted to make a normalized sigmoid function (NSF) that is bounded on and as well.

In order to make the NSF, we utilized the above default curve. We split into two split case: 1) and 2) .

1)

(default) 🡪 (Making and )

The final , and it is and .

2)

To make this case, we need three steps: (i), (ii), and (iii) applying offset.

(i) inversion of (new )

(ii) inversion of (new )

(iii) applying offset (new , new )

In summary,

Here, . The curve is as follows:

