Day 25 8:10am 26th December

Standardize Data / Z-score

Data: $x_1, \ldots x_i, \ldots x_n$

Mean : 5

Standard deviation : 4

Variance : 16

x_i : 9

Standard score : $\frac{x_i - \mu}{\sigma}$

Standard score $= \frac{9 - 5}{4} = \frac{4}{4} = 1$

Why is the standard score important?

Enable one's to identify outliers in the data set.

→ It gives information about how many standard deviations a datapoint is from the mean of the dataset.

Multiply by 1.5

Data: $x_i, \ldots x_i, \ldots x_n$

Mean : 5

Standard deviation : 4

Variance : 16

$y_i, \ldots y_i \ldots y_n$

μ :

σ :

σ^2 :

Data set initial

2, 4, 4, 16

$\frac{20}{4}$

Mean : 5

Standard deviation :

$x-\mu$	$(x-\mu)^2$
-3	9
-1	1
-1	1
5	25

$\div n$

$= \sqrt{\frac{36}{4}}$

$= 3$

$\longrightarrow$ 3, 6, 6, 15

Mean: 7.5

Stand

-4.5	20.25
-1.5	2.25
-1.5	2.25
7.5	56.25

$\sqrt{\frac{81}{4}} = 20.25$

Standard deviation = 4.5