Machine Learning Course | Arabic

Data Preprocessing
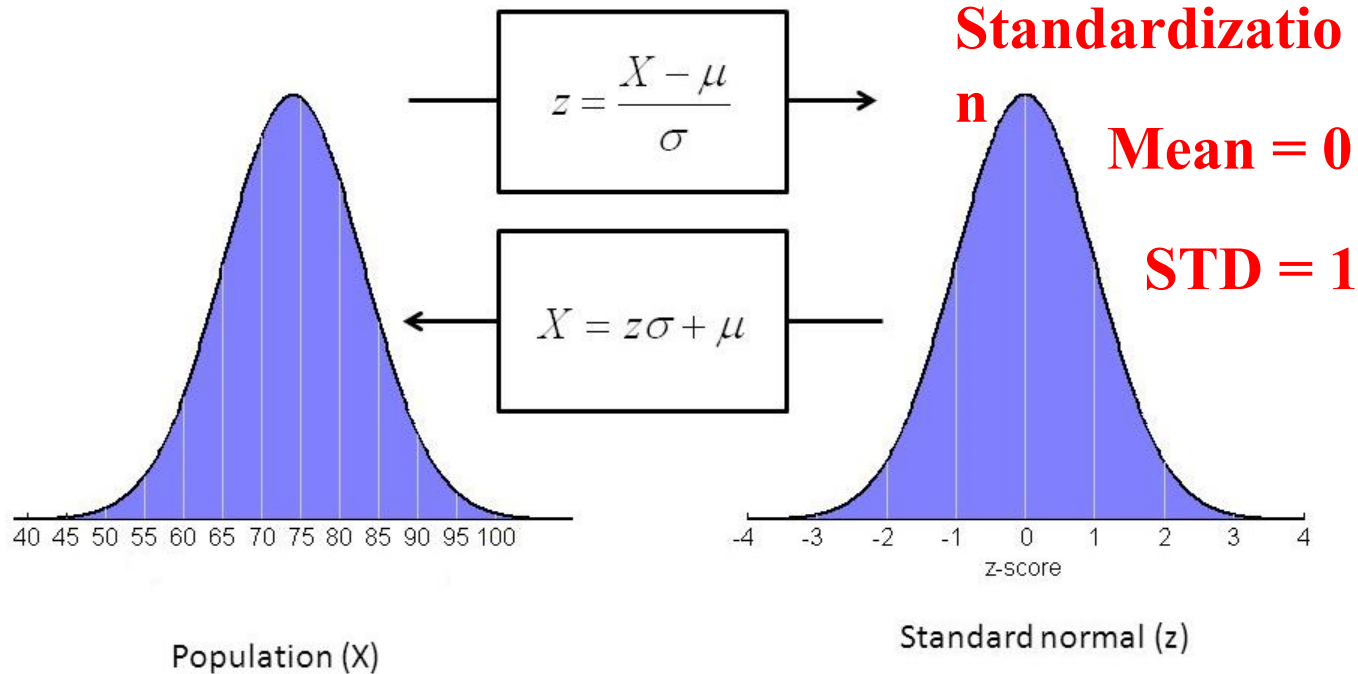
Level - 01

Link to Lecture on Youtube

07

Z - Score

Standard Normal Distribution

Standardization

Mean = 0

STD = 1

$$z = \frac{X - \mu}{\sigma}$$

$$X = z\sigma + \mu$$

Population (X)

Standard normal (z)

z-score

Z - Score

It **measures** how **far** a **point** from the **mean**.

But **more technically,** it **calculates how many standard deviations** a point below or above the mean.

$$Z = \frac{X - \bar{X}}{s}$$

Ex.

Let's say you have a **test score** of **190**. The test has a **mean** of **150** and a **STD** of **25**. Assuming a normal distribution.

z = (x – mean) / std
= (190 – 150) / 25 = 1.6 >> STD from the mean

The z score tells you how many standard deviations from the mean your point is. In this example, your score is 1.6 standard deviations above the mean.

Dealing with outliers by Z-score

On board.

Thank You!

Do you have any questions?

Write them in the comments

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