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* **Mean Normalization:**

Mean Normalization, also known as zero mean normalizatn is a data preprocessing technique used to center the data around zero by subtracting the mean (average) from each data point. This process makes the data distribution have a mean of 0 & it helps ~~with~~ in dealing with features that have different scales.

Heres how mean normalization works:

1. Calculate Mean
2. Subtract Mean from Original value

Normalized Value = X - Mean

3. Centered Data: The resulting values will now be centered around 0, with positive values indicating how much the original value is above the mean & negative values indicating how much it's below the mean.

Lets consider we have a dataset of exam scores ranging from 60 to 90, to normalize we calculated mean score to be 75.

- Mean = 75
- X = 80

Normalized Value = 80 - 75 = 5

So, the score of the 80 would be mean normalized to 5 using this technique.