Feature Scaling

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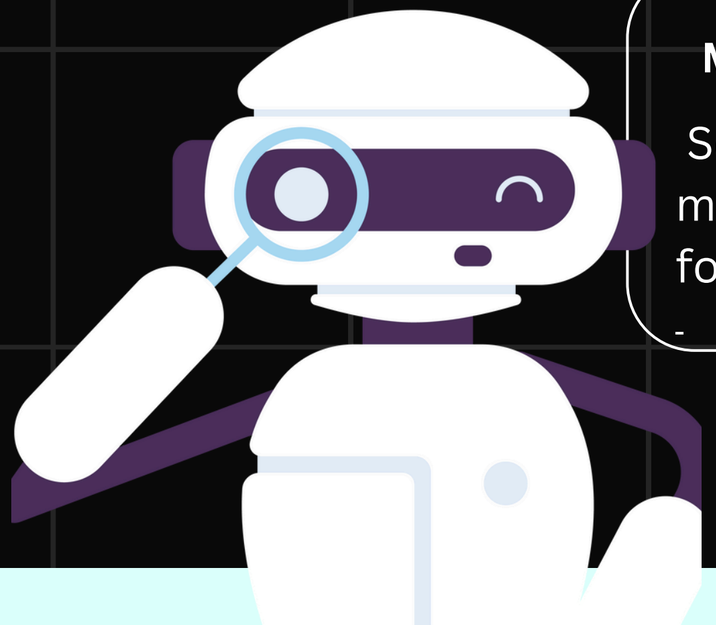
Feature Scaling :is the process of rescaling the range of features (or variables) in the data to ensure that they are within a specific range, typically to make processing and learning easier for machine learning models.

Types of FeatureScaling?



- Log Transformation
- Description: Applies a logarithmic transformation to compress the range of the data.
- formula:x=log(x+1)

Normalization (Min-Max Scaling)

- Converts the values to a range between 0and1.
- Formula:$x = \frac{x - xmin}{xmax - xmin}$

MaxAbs Scaling

Scales each feature by dividing by the maximum absolute value.

formula:$x = \frac{x}{|X|}$

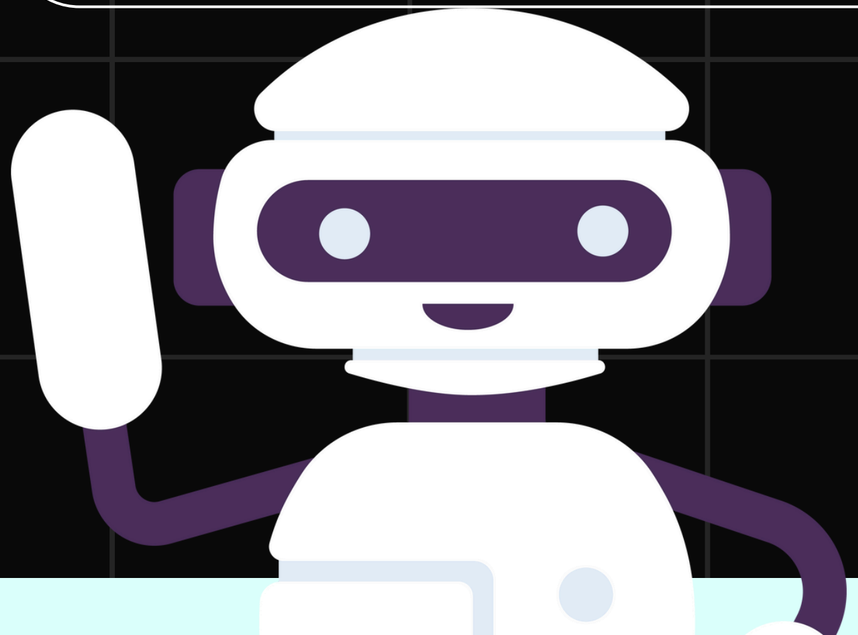
Types of FeatureScaling?

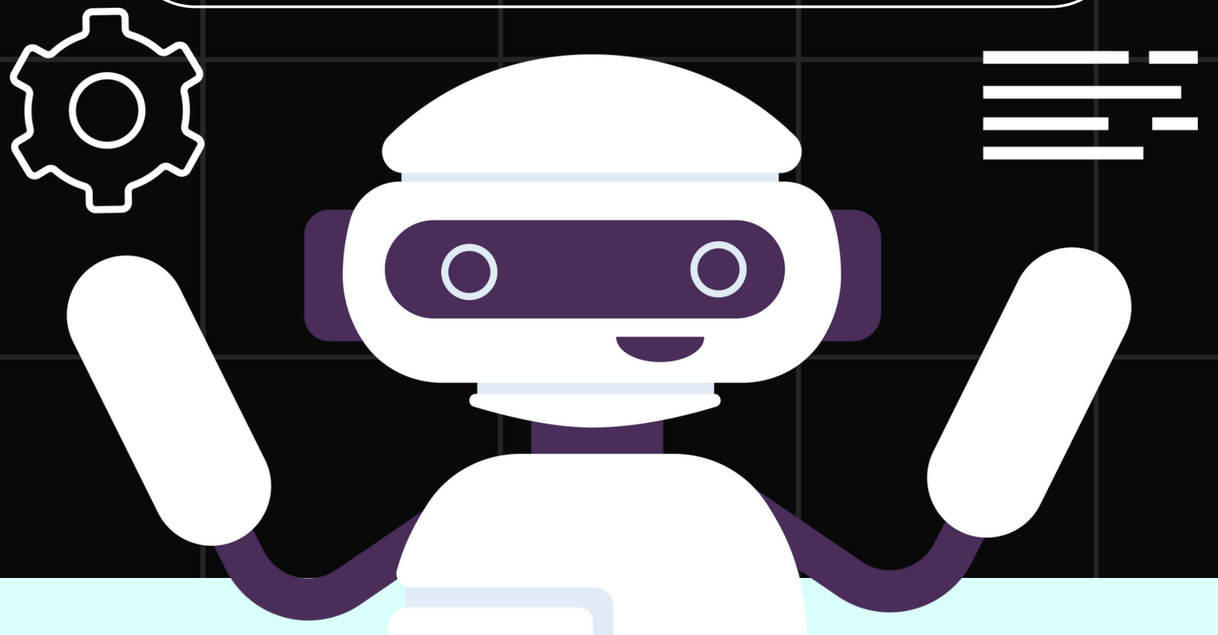
Exponential Scaling

- It transforms the feature by applying which increases the value more rapidly compared to linear scaling.
- Formulax=x
e

Square Root Scaling

- which is particularly useful when dealing with features that have a right-skewed distribution or a few large values.
- **Formula**: s=roots





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Thankyou