Preprocessing Type	Scikit-learn Function	Range	Mean	Distribution Characteristics	When Use	Definition	Notes
Scale	MinMaxScaler	0 to 1 default, can override	varies	Bounded	Use first unless have theoretical reason to need stronger medicine.	Add or substract a constant. Then multiply or divide by another constant. MinMaxScaler subtracts the mimimum value in the column and then divides by the difference between the original maximum and original minimum.	Preserves the shape of the original distribution. Doesn't reduce the importance of outliers. Least disruptive to the information in the original data. Default range for MinMaxScaler is 0 to 1.
Standardize	RobustScaler	varies	varies	Unbounded	Use if have outliers and don't want them to have much influence.	RobustScaler standardizes a feature by removing the median and dividing each feature by the interquartile range.	Outliers have less influence than with MinMaxScaler. Range is larger than MinMaxScaler or StandardScaler.
Standardize	StandardScaler	varies	0	Unbounded, Unit variance	When need to transform a feature so it is close to normally distributed.	StandardScaler standardizes a feature by removing the mean and dividing each value by the standard deviation.	Results in a distribution with a standard deviation equal to 1 (and variance equal to 1). If you have outliers in your feature (column), normalizing your data will scale most of the data to a small interval.
Normalize	Normalizer	varies	0	Unit norm	Rarely.	An observation (row) is normalized by applying l2 (Euclidian) normalization. If each element were squared and summed, the total would equal 1. Could also specify l1 (Manhatten) normalization.	Normalizes each sample observation (row), not the feature (column)!
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See this Medium article for discussion:	https://www.kaggle.com/discdiver/scale-standardize-or-normalize-with-sklearn						