

Summary – Which to Use?

Scaler	Best for	Range after scaling	Sensitive to outliers?
StandardScaler	SVM, logistic reg, neural nets, PCA	≈ -3 to +3 (unbounded)	Yes
MinMaxScaler	Neural nets (some), bounded input	0 to 1	Yes
(none)	Tree-based models (RF, XGBoost, etc.)	original scale	No

- If you want **RobustScaler** (median/IQR – better with outliers):

Python

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```
from sklearn.preprocessing import RobustScaler
robust_scaler = RobustScaler()
df[feature_cols] = robust_scaler.fit_transform(df[feature_cols])
```