

Implicit Feature Engineering

- is when the ML model itself automatically transforms or expands features internally, without you explicitly creating them.

Ex: say you have 2 features: x_1, x_2
in explicit Feature engineering you might add for ex: x_1^2, x_2^2, x_1x_2 → P-2
in implicit Feature eng the model does this for you internally (no-code)

- Where?
is it
used?

Model	How it does implicit Feature Eng
Kernel SVMs P-22	use the Kernel trick to map inputs into high dim space implicitly (eg RBF adds infinite non-linear functions)
Neural Networks	hidden layers learn non linear transformation of features automatically (Deep Learning)
Decision Trees / random Forests	Learn interaction effects (splits on combination of features) without you encoding them
Polynomial Features + Linear Model	you can make it explicit (Polynomial Features) or implicit via the model kernel