**Extra Algorithms**

**Regression:**

1. **Quantile Regression**

**Quantile Regression** predicts **different percentiles (quantiles)** of the output instead of just the average.

So instead of just asking,

“What is the *average* income for 5 years of experience?”

You can ask:

* "What is the **10th percentile** income?" → lower earners
* "What is the **50th percentile (median)** income?" → middle earners
* "What is the **90th percentile** income?" → higher earners

**Model:**

**from sklearn.linear\_model import QuantileRegressor**

**regressor = QuantileRegressor(quantile=0.5, solver='highs')**

**R2Score:**

**0.91**

1. **Ridge Regression**

**Ridge Regression** is a version of linear regression that **adds a penalty** to keep the model **simpler and more stable**.

It changes the formula to minimize not just error, but also the size of the coefficients.

**Model:**

**from sklearn.linear\_model import Ridge**

**regressor = Ridge(solver='auto')**

**R2Score:**

**0.88**