



# Scikit Learn

## version 1.0

machine learning in Python

**pip install --upgrade scikit-learn**

## Important Highlights

- Multiple input parameters must be specified with the parameter name - Enforcing keyword-only arguments
- **HistGradientBoostingRegressor("squared\_error", 0.1, 100)** is no more valid now
- Sklearn 1.0 needs the below format  
**HistGradientBoostingRegressor(loss="squared\_error", learning\_rate=0.1, max\_iter=100)**
- For multiple params, keyword param name needs to be specified

Prabakaran Chandran  
prabakaranchandran.com  
#LearnwithKaran



# Scikit Learn

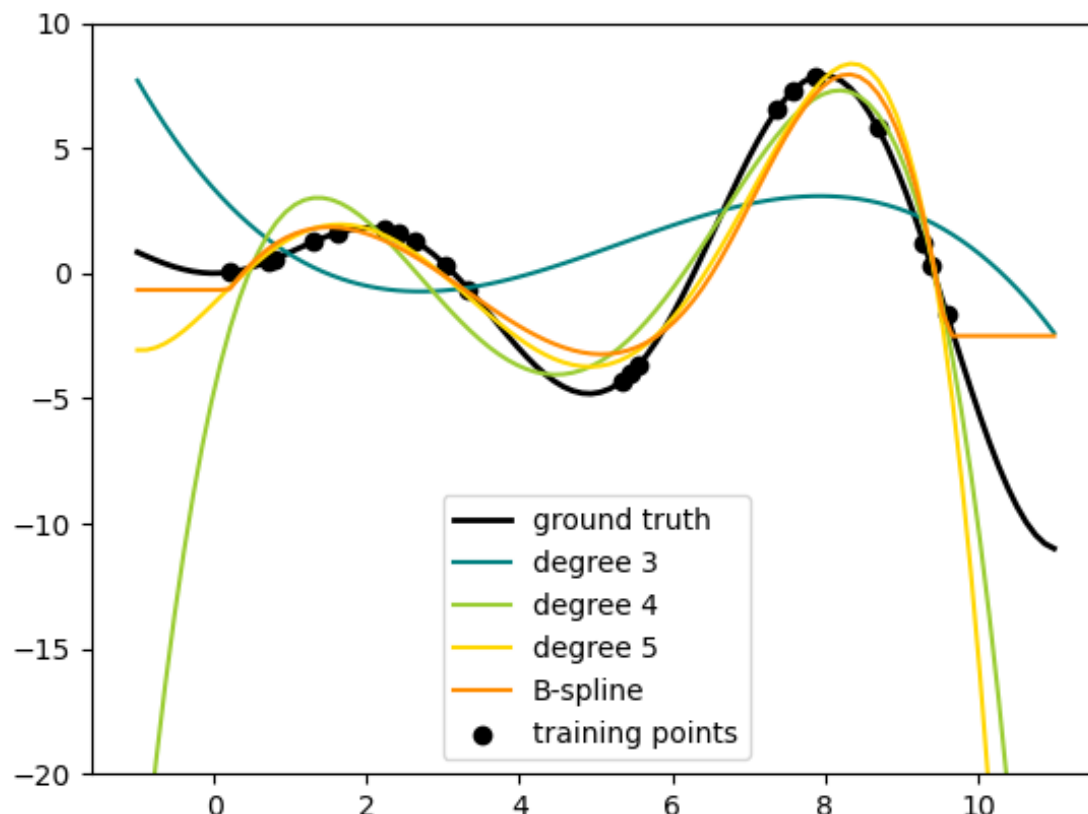
## version 1.0

machine learning in Python

`pip install --upgrade scikit-learn`

## Important Highlights

- polynomial transformations/splines can be added now using **splineTransformer**
- **The SplineTransformer** implements a **B-spline basis**.



Prabakaran Chandran  
prabakaranchandran.com  
#LearnwithKaran



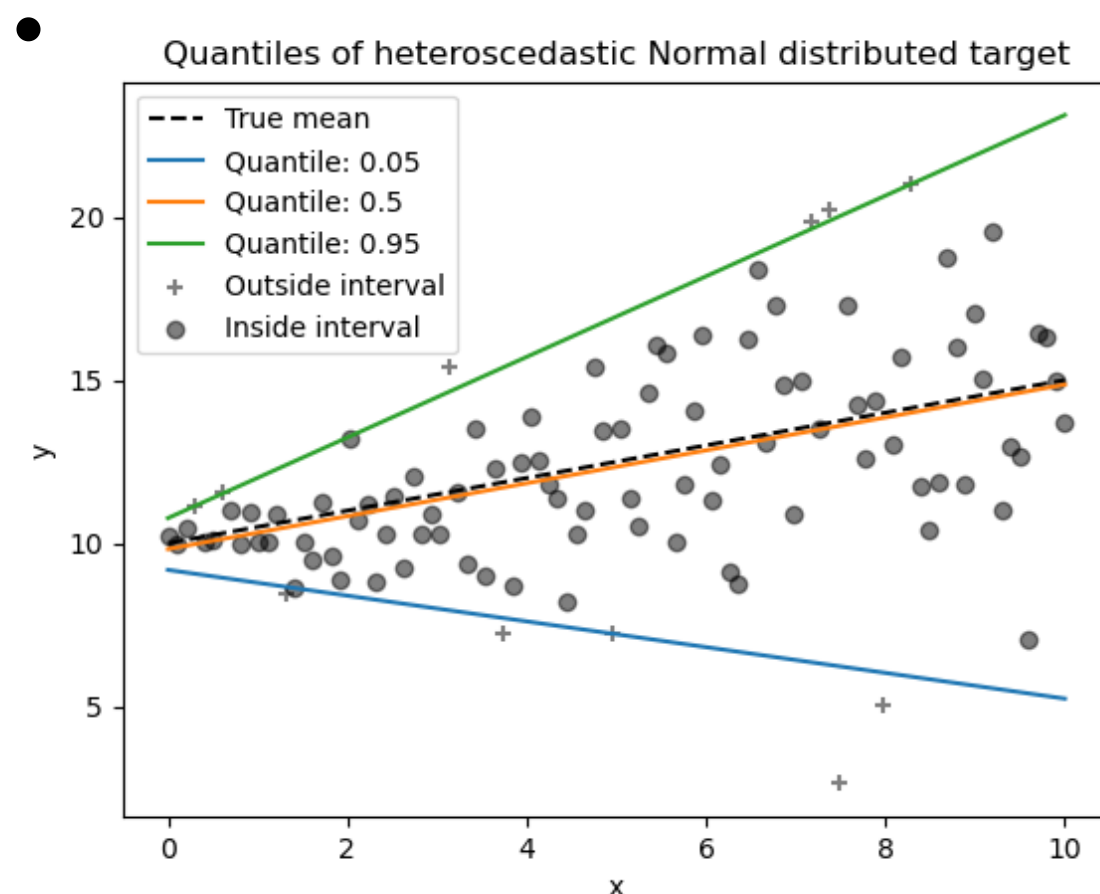
# Scikit Learn

## version 1.0

machine learning in Python

## Important Highlights

- Quantile Regression is added under **QuantileRegressor** API
- **L1 penalty** is available in this **QuantileRegressor**
- **Quantile regression** makes no assumptions about the distribution of the residuals.



Prabakaran Chandran  
prabakaranchandran.com  
#LearnwithKaran



# Scikit Learn

## version 1.0

machine learning in Python

## Important Highlights

- **get\_feature\_names\_out** has been added to the transformer API to get the names of the output features. **get\_feature\_names** has in turn been deprecated.
- Many Plotting functions have been simplified and made flexible ex : **metrics.ConfusionMatrixDisplay**, **metrics.PrecisionRecallDisplay**, **metrics.DetCurveDisplay**, and **inspection.PartialDependenceDisplay**
- **New SVM model - SGDOneClassSVM** implements an online linear version of the One-Class SVM using stochastic gradient descent.
- **HistGradientBoostingClassifier** is made more stable now

**Prabakaran Chandran**  
**prabakaranchandran.com**  
**#LearnwithKaran**



# Scikit Learn

## version 1.0

machine learning in Python

**pip install --upgrade scikit-learn**

- **feature\_selection.r\_regression** computes Pearson's R correlation coefficients between the features and the target
- added **model\_selection.StratifiedGroupKFold**, which combines **model\_selection.StratifiedKFold** and **model\_selection.GroupKFold**, providing an ability to split data preserving the distribution of classes in each split while keeping each group within a single split
- Many Enhancements in Feature Encoders such as **one-hot encoder and ordinal-encoder**
- **pinball loss** and **Tweedie d2 score** metrics have been added

**Prabakaran Chandran**  
**prabakaranchandran.com**  
**#LearnwithKaran**