

```
In [46]: from sklearn.datasets import make_friedman1, fetch_california_housing
from sklearn.feature_selection import RFE
from sklearn.linear_model import LinearRegression
estimator = LinearRegression()
```

```
In [47]: X, y = make_friedman1(n_samples=50, n_features=10, random_state=0)
```

RFE

```
In [48]: X.shape, y.shape
```

```
Out[48]: ((50, 10), (50,))
```

```
In [49]: selector = RFE(estimator, n_features_to_select=3, step=1)
selector = selector.fit(X, y)
```

```
In [50]: selector.ranking_
```

```
Out[50]: array([3, 2, 1, 1, 1, 4, 5, 8, 7, 6])
```

```
In [51]: X = selector.transform(X)
X.shape
```

```
Out[51]: (50, 3)
```

SelectFromModel

```
In [52]: from sklearn.feature_selection import SelectFromModel
```

```
In [53]: dataset = fetch_california_housing()
estimator = LinearRegression()
```

```
In [54]: X = dataset.data
y = dataset.target
```

```
In [55]: X.shape
```

```
Out[55]: (20640, 8)
```

```
In [56]: selector = SelectFromModel(estimator).fit(X, y)
print("Threshold: ", selector.threshold_)
```

```
Threshold:  0.25726693216557395
```

```
In [57]: X = selector.transform(X)
X.shape
```

```
Out[57]: (20640, 4)
```

SequentialFeatureSelection

```
In [58]: from sklearn.feature_selection import SequentialFeatureSelector
```

```
In [59]: sfs = SequentialFeatureSelector(estimator, n_features_to_select=3)
```

```
In [60]: sfs.fit(X, y)
sfs.transform(X).shape
```

```
Out[60]: (20640, 3)
```