

Feature Selection using Recursive Feature Elimination

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How RFE Works:

1. **Model Training:** RFE starts by training a model on the entire set of features.
2. **Feature Ranking:** The importance of each feature is assessed based on the model's coefficients or feature importance scores.
3. **Feature Elimination:** The least important feature is removed from the dataset.
4. **Iteration:** The process is repeated on the reduced dataset until the desired number of features is reached.

```
from sklearn.feature_selection import RFE
```

```
from sklearn.svm import SVC
```

```
from sklearn.datasets import load_iris
```

```
# Load dataset
```

```
data = load_iris()
```

```
X = data.data
```

```
y = data.target
```

```
# Initialize the model
```

```
model = SVC(kernel="linear")
```

Initialize RFE with the model

rfe = RFE(model, n_features_to_select=2)

Fit RFE

rfe = rfe.fit(X, y)

Get selected features

print("Selected Features:", rfe.support_)

print("Feature Ranking:", rfe.ranking_)