In [23]:
```python
from sklearn.datasets import load_iris
from sklearn.model_selection import train_test_split
from sklearn.naive_bayes import GaussianNB

%matplotlib notebook
```

In [24]:
```python
X, y = load_iris(return_X_y=True)
X = X[:, 1:3]
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.5, random_state=42)
```
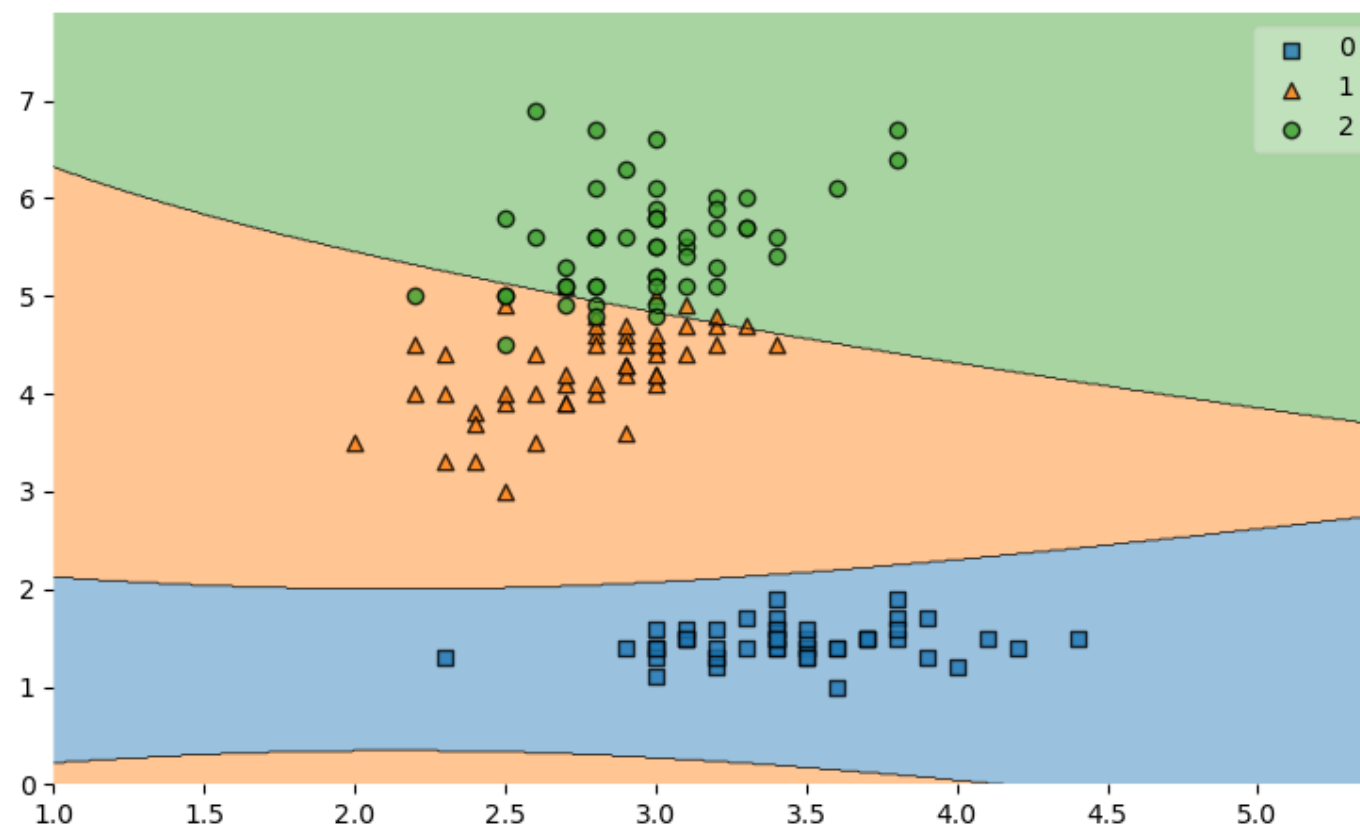
In [25]:
```python
gaussianNB = GaussianNB()
gaussianNB.fit(X_train, y_train)
```

Out[25]:
```
▾ GaussianNB

GaussianNB()
```

In [26]:
```python
y_pred = gaussianNB.predict(X_test)
```

In [27]:
```python
print(f'Number of mislabelled points = {(y_test != y_pred).sum()}/{X_test.shape[0]}')
```

```
Number of mislabelled points = 5/75
```

In [28]:
```python
from mlxtend.plotting import plot_decision_regions
plot_decision_regions(X, y, clf=gaussianNB)
```

Out[28]: <AxesSubplot:>

In [ ]: