[73]:
```
import numpy as np
import matplotlib.pyplot as plt
import pandas as pd
from sklearn.svm import SVR
```

0.0.1 SVM-Regression

[74]:
```
df = pd.read_excel('zinsen.xlsx', sheet_name="GTDEM10Y Govt", header=5,␣
↪parse_dates=True, index_col='Dates')
```

[75]:
```
df['Numeric_Date'] = pd.to_numeric(df.index)

x = df['Numeric_Date'].values.reshape(-1, 1)
y = df['PX_LAST'].values

svm_reg = SVR(kernel='rbf', C=1.0, gamma='scale', epsilon=0.1)
svm_reg.fit(x, y)

x_pred = df['Numeric_Date'].values.reshape(-1, 1)
y_pred = svm_reg.predict(x_pred)

plt.figure(figsize=(12, 6))
plt.plot(df.index, y, label='Original')
plt.plot(df.index, y_pred, label='Vorhersage')
plt.xlabel('Dates')
plt.ylabel('Yields [%]')
plt.title('Germany Government Bond 10Y')
plt.legend()
plt.show()
```