

```
import numpy as np
import matplotlib.pyplot as plt
from sklearn.linear_model import LinearRegression

x = np.random.rand(100,1)

y = 5*x + 0.01*np.random.randn(100,1)

linreg = LinearRegression()

linreg.fit(x,y)

ypredict = linreg.predict(x)

plt.plot(x,np.abs(ypredict -y)/abs(y), "ro")

plt.axis([0,1.0,0.0,0.5])

plt.xlabel(r'$x$')

plt.ylabel(r'$\epsilon_{\mathrm{relative}}$')

plt.title(r'Relative error')

plt.show()
```

