

```
In [1]: %matplotlib inline
import matplotlib.pyplot as plt
import numpy as np
from sklearn.linear_model import LinearRegression
```

```
In [2]: rng = np.random.RandomState(2) #Just generating some random numbers
x = 10 * rng.rand(50)
y = 2 * x - 5 + rng.randn(50)
```

```
In [3]: def fit_line(Lab2_X, Lab2_Y):

    model = LinearRegression(fit_intercept=True)
    model.fit(Lab2_X[:, np.newaxis], Lab2_Y)
    xfit = np.linspace(0, 10, 1000) #Generate some evenly spaced data between
    yfit = model.predict(xfit[:, np.newaxis]) #Doing predictions using our pr
    slope = model.coef_[0]
    intercept = model.intercept_

    return (slope, intercept)
```

```
In [4]: fit_line(x,y)
```

```
Out[4]: (1.9973098669132814, -5.046969544979194)
```

```
In [10]: slope_and_intercept = fit_line(x,y)
print ("Slope: ", slope_and_intercept[0] ,
      "\nIntercept: ", slope_and_intercept[1])
```

```
Slope:  1.9973098669132814
Intercept:  -5.046969544979194
```