

## ✓ Multiple Linear Regression in Python.

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```
import numpy as np
import matplotlib as mpl
from mpl_toolkits.mplot3d import Axes3D
import matplotlib.pyplot as plt
```

```
def generate_dataset(n):
    x = []
    y = []
    random_x1 = np.random.rand()
    random_x2 = np.random.rand()

    for i in range(n):
        x1 = i
        x2 = i/2 + np.random.rand()*n
        x.append([1, x1, x2])
        y.append(random_x1 * x1 + random_x2 * x2 + 1)

    return np.array(x), np.array(y)
```

```
x, y = generate_dataset(200)
```

```
mpl.rcParams['legend.fontsize'] = 12
fig = plt.figure()
ax = fig.add_subplot(projection='3d')
ax.scatter(x[:, 1], x[:, 2], y, label='y', s=5)
ax.legend()
ax.view_init(45, 0)

plt.show()
```

