

Matrix Multiplication using Numpy:

```
In [1]: import numpy as np
```

```
In [4]: x = np.array([1,2])  
w = np.random.randn(3,2)  
b = 1  
  
h = w.dot(x) + b
```

```
In [12]: h.shape
```

```
Out[12]: (3,)
```

```
In [24]: h=h.reshape((3,1))
```

```
In [25]: h
```

```
Out[25]: array([[ -0.56692122],  
               [ -1.46837044],  
               [ -2.21104227]])
```

```
In [18]: h.shape
```

```
Out[18]: (3, 1)
```

```
In [21]: h = np.transpose(h)
```

```
In [22]: h
```

```
Out[22]: array([[ -0.56692122, -1.46837044, -2.21104227]])
```