

ejemplo con mnist

In [1]:

```
import tensorflow as tf
```

In [2]:

```
from tensorflow.examples.tutorials.mnist import input_data
```

In [3]:

```
import matplotlib.pyplot as plt
```

In [4]:

```
pwd
```

Out[4]:

```
'C:\\Users\\SARA'
```

In [5]:

```
cd Downloads
```

```
C:\\Users\\SARA\\Downloads
```

In [7]:

```
mnist= input_data.read_data_sets('MNIST/',one_hot=True)
```

```
Extracting MNIST/train-images-idx3-ubyte.gz
Extracting MNIST/train-labels-idx1-ubyte.gz
Extracting MNIST/t10k-images-idx3-ubyte.gz
Extracting MNIST/t10k-labels-idx1-ubyte.gz
```

In [8]:

```
type(mnist)
```

Out[8]:

```
tensorflow.contrib.learn.python.learn.datasets.base.Datasets
```

In [10]:

```
mnist.train.num_examples
```

Out[10]:

```
55000
```

In [11]:

```
mnist.test.num_examples
```

Out[11]:

```
10000
```

In [12]:

In [12]:

```
imagen= mnist.train.images[1]
```

In [13]:

```
imagen = imagen.reshape(28,28)
```

In [14]:

```
imagen
```

Out[14]:

```
array([[0., 0., 0., 0., 0.,
        0., 0., 0., 0., 0.,
        0., 0., 0., 0., 0.,
        0., 0., 0., 0., 0.,
        0., 0., 0.],
       [0., 0., 0., 0., 0.,
        0., 0., 0., 0., 0.,
        0., 0., 0., 0., 0.,
        0., 0., 0., 0., 0.,
        0., 0., 0., 0., 0.,
        0., 0., 0.],
       [0., 0., 0., 0., 0.,
        0., 0., 0., 0., 0.,
        0., 0., 0., 0., 0.,
        0., 0., 0., 0., 0.,
        0., 0., 0.],
       [0., 0., 0., 0., 0.,
        0., 0., 0., 0., 0.,
        0., 0., 0., 0., 0.,
        0., 0., 0.],
       [0., 0., 0., 0., 0.,
        0., 0., 0., 0., 0.,
        0., 0., 0.],
       [0., 0., 0., 0., 0.,
        0., 0., 0., 0., 0.,
        0., 0., 0.],
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        0., 0., 0., 0., 0.,
        0., 0., 0.],
       [0., 0., 0., 0., 0.,
        0., 0., 0., 0., 0.,
        0., 0.08235294, 0.5568628, 0.91372555, 0.98823535,
        0.9921569, 0.98823535, 0.9921569, 0.98823535, 0.8745099,
        0.07843138, 0., 0., 0., 0.,
        0., 0., 0.],
       [0., 0., 0., 0., 0.,
        0., 0., 0., 0., 0.,
        0.48235297, 0.9960785, 0.9921569, 0.9960785, 0.9921569,
        0.87843144, 0.7960785, 0.7960785, 0.8745099, 1.,
        0.8352942, 0., 0., 0., 0.,
        0., 0., 0.],
       [0., 0., 0., 0., 0.,
        0., 0., 0., 0., 0.,
        0.48235297, 0.9960785, 0.9921569, 0.9960785, 0.9921569,
        0.87843144, 0.7960785, 0.7960785, 0.8745099, 1.,
        0.8352942, 0., 0., 0., 0.,
        0., 0., 0.]])
```

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0.7960785 , 0.9921569 , 0.98823535, 0.9921569 , 0.8313726 ,  
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0. , 0. , 0. , 0. , 0. ,  
0. , 0. , 0. ],  
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0.6745098 , 0.98823535, 0.7960785 , 0.07843138, 0. ,  
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0. , 0. , 0. ],  
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0. , 0. , 0. , 0. , 0. ,  
0. , 0.7176471 , 0.9960785 , 0.43921572, 0. ,  
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0. , 0. , 0. ],  
[0. , 0. , 0. , 0. , 0. ,  
0.24313727, 0.7960785 , 0.6392157 , 0. , 0. ,  
0. , 0. , 0. , 0. , 0. ,

```

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0.      , 0.      , 0.      , 0.      , 0.      ,
0.      , 0.      , 0.      ],
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0.      , 0.      , 0.      , 0.      , 0.      ,
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[0.      , 0.      , 0.      , 0.      , 0.      ,
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0.32156864, 0.      , 0.      , 0.      , 0.      ,
0.      , 0.      , 0.      , 0.      , 0.      ,
0.      , 0.      , 0.      ],
[0.      , 0.      , 0.      , 0.      , 0.      ,
0.      , 0.07843138, 0.5921569 , 0.5921569 , 0.9921569 ,
0.67058825, 0.5921569 , 0.5921569 , 0.15686275, 0.      ,
0.      , 0.      , 0.      , 0.      , 0.      ,
0.      , 0.      , 0.      ],
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0.      , 0.      , 0.      , 0.      , 0.      ,
0.      , 0.      , 0.      , 0.      , 0.      ,
0.      , 0.      , 0.      ],
[0.      , 0.      , 0.      , 0.      , 0.      ,
0.      , 0.      , 0.      , 0.      , 0.      ,
0.      , 0.      , 0.      , 0.      , 0.      ,
0.      , 0.      , 0.      , 0.      , 0.      ,
0.      , 0.      , 0.      , 0.      , 0.      ,
0.      , 0.      , 0.      ], dtype=float32)

```

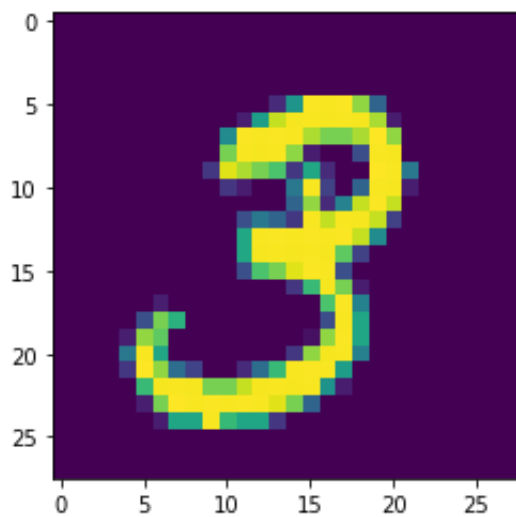
In [15]:

```
plt.imshow(imagen)
```



Out[15]:

<matplotlib.image.AxesImage at 0x1cd6fda3048>



In []:

In []:

In []: