

```
In [7]: import numpy as np
import math as ma
from scipy import misc, ndimage
import matplotlib.pyplot as plt
%matplotlib inline
```

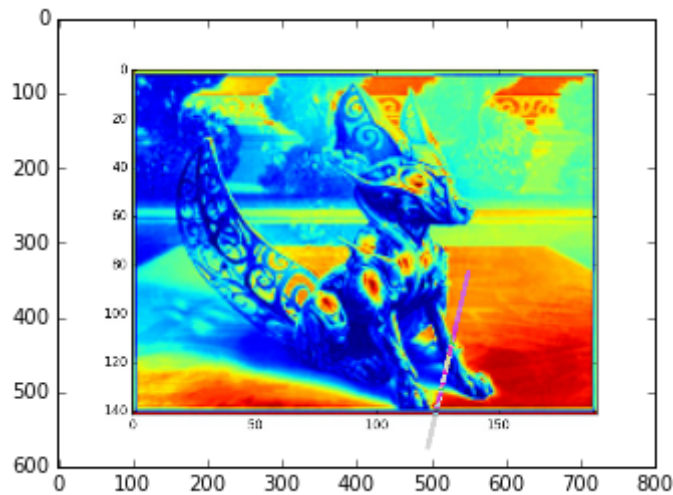
```
In [2]: def line( x0, y0, x1, y1):
    x = np.arange( x0, x1+1 , 1)
    m = (y1 - y0)/(x1 - x0)
    y = ( m*( x - x0) + y0 ).astype('int')
    return x,y
```

```
In [105]: def addline( R, G, B):
    thick = int(np.random.uniform( 1, R.shape[1]/100) )
    dark = int(np.random.uniform( 1, 100 ))
    x0 = int(np.random.uniform( 0, R.shape[0]-1 ))
    y0 = int(np.random.uniform( 0, R.shape[1] ))
    x1 = int(np.random.uniform( x0+1, R.shape[0] ))
    y1 = int(np.random.uniform( 0, R.shape[1] ))
    x = np.array([])
    y = np.array([])
    for i in range(thick):
        xn,yn = line( x0, (y0+i)%R.shape[1] ,x1, (y1 + i)%R.shape[1])
        x = np.append( x, xn ).astype('int')
        y = np.append( y, yn ).astype('int')
    R[x,y] = (R[x,y] - dark)%255
    G[x,y] = (G[x,y] - dark)%255
    B[x,y] = (B[x,y] - dark)%255
    return R,G,B
```

```
In [12]: im = misc.imread('Filigree Familiar.full.Blue.jpg')
```

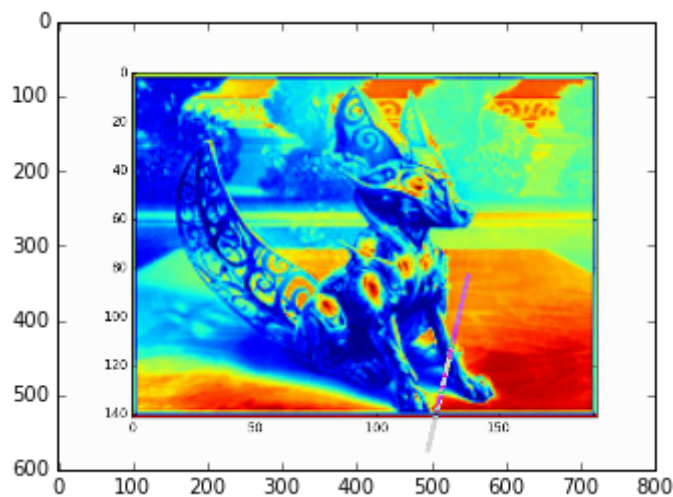
```
In [13]: R = im[:, :, 0]
G = im[:, :, 1]
B = im[:, :, 2]
R, G, B = addline(R, G, B)
im = np.array([R, G, B])
im = np.transpose( im , (1, 2, 0) )
plt.imshow( im)
```

Out[13]: <matplotlib.image.AxesImage at 0x7f452f025908>



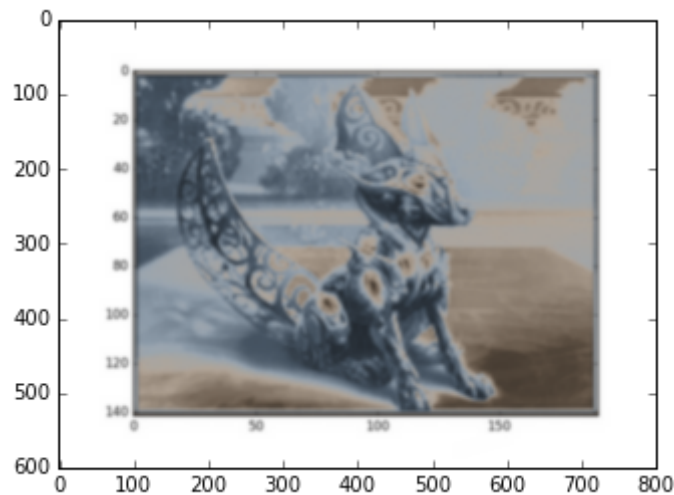
```
In [15]: plt.imshow( ndimage.filters.gaussian_filter( im, 0.3 ))
```

Out[15]: <matplotlib.image.AxesImage at 0x7f452dc66f28>



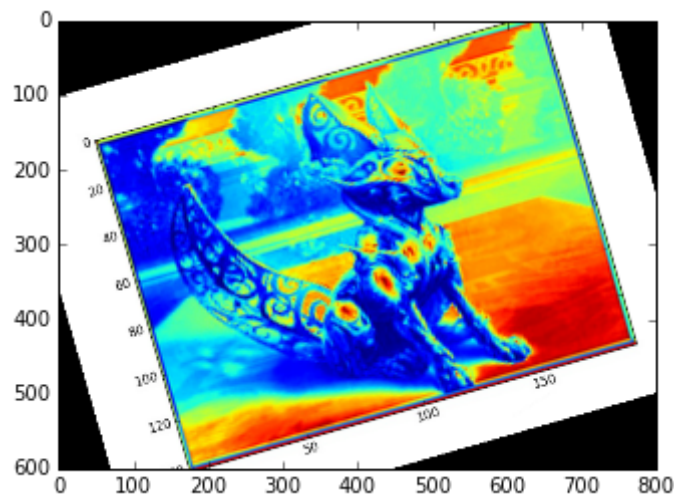
```
In [8]: plt.imshow( ndimage.filters.gaussian_filter( im, 2 ))
```

```
Out[8]: <matplotlib.image.AxesImage at 0x7f0874c735f8>
```



```
In [10]: for i in range(100):  
    im = misc.imread('Accomplished Automaton.full.jpg')  
    for j in range( ma.floor(np.random.uniform(0,100))):  
        R = im[:, :, 0]  
        G = im[:, :, 1]  
        B = im[:, :, 2]  
        R, G, B = addline(R,G,B)  
        im = np.array([R,G,B])  
    im = np.transpose( im , (1,2,0) )
```

```
Out[10]: <matplotlib.image.AxesImage at 0x7f0874b7dcf8>
```



```
In [8]: ma.floor(np.random.uniform( 0, 100)) # Number of Lines
```

```
Out[8]: 93
```

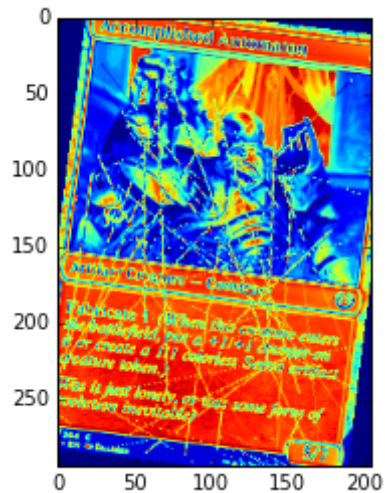
```
In [ ]:
```

```

In [140]: im = misc.imread('Accomplished Automaton.full.jpg')
for j in range( ma.floor(np.random.uniform(0,100))):
    R = im[:, :,0]
    G = im[:, :,1]
    B = im[:, :,2]
    R, G, B = addline(R,G,B)
    im = np.array([R,G,B])
    im = np.transpose( im , (1,2,0) )
im = ndimage.filters.gaussian_filter( im, np.random.uniform(0,1.5))
im = misc.imrotate( im, np.random.normal(0,10))
plt.imshow( im[:, :,0])

```

Out[140]: <matplotlib.image.AxesImage at 0x7f451e463320>



```

In [104]: im = misc.imread('Accomplished Automaton.full.jpg')
R = im[:, :,0]
G = im[:, :,1]
B = im[:, :,2]
R, G, B = addline(R,G,B)
im = np.array([R,G,B])
im = np.transpose( im , (1,2,0) )
plt.imshow( im)

```

Out[104]: <matplotlib.image.AxesImage at 0x7f451f198c50>



```
In [96]: R = im[:, :, 0]
G = im[:, :, 1]
B = im[:, :, 2]
R, G, B = addline(R, G, B)
im = np.array([R, G, B])
im = np.transpose( im , (1, 2, 0) )
plt.imshow( im)
```

Out[96]: <matplotlib.image.AxesImage at 0x7f451f493780>



In []:

In []: