```
import numpy as np
import random

misc = 0
n = 1000

for t in range(1000):

    points = np.zeros([n, 3])
    y = np.zeros([n])
    ytrue = np.zeros([n])

    for i in range(n): #same code as before
        points[i,0] = 1 #set all x0 to 1
        points[i,1] = np.random.uniform(-1,1) #set all x1 to the x-coordinate of point
        points[i,2] = np.random.uniform(-1,1) #set all x2 to the y-coordinate of point
        ytrue[i] = np.sign(np.square(points[i,1]) + np.square(points[i,2]) - 0.6)
        if np.random.randint(0,10) != 1:
            y[i] = np.sign(np.square(points[i,1]) + np.square(points[i,2]) - 0.6)
        else:
            y[i] = -1*np.sign(np.square(points[i,1]) + np.square(points[i,2]) - 0.6)

    w =
    np.dot(np.dot(np.linalg.inv(np.dot(np.matrix.transpose(points),points)),np.matrix.transpose(p
    oints)),y)
    g = np.sign(np.dot(points,w))

    misc += (1000-np.sum(np.dot(g,ytrue)))/2

print(misc/1000000)
```