# Regression Approach to Variable Selection

X1 = np.random.randint(2,5,10)

X2 = np.random.randint(-6,-1,10)

for k in range(10):

for n in range(20):

X[n,k] = X1[k] + 0.5\*np.random.randn()

for n in range(20,50):

X[n,k] = X2[k] + 0.4\*np.random.randn()

for k in range(10,50):

for n in range(50):

X[n,k] = 5\*np.random.randn()

from scipy.stats import linregress

R = np.zeros((50,50))

for k in range(50):

for l in range(50):

slope, intercept, r\_value, p\_value, std\_err = linregress(X[:,k],X[:,l])

R[k,l] = r\_value

plt.matshow(np.abs(R))

plt.colorbar()

plt.show()

