

File Edit View Insert Cell Kernel Help

Code

Eliminate

```
In [23]: def P1GnChain(n,condMat,chainLen):
          #Initialize \phi
          if n == 0:
              m = condMat[0]
          else:
              m = condMat[1]
          #Update \phi for nodes three through one
          for ii in xrange(chainLen-1):
              mtemp = m[:]
              mtemp[0]= m[0]*condMat[0][0]+m[1]*condMat[1][0]
              mtemp[1]= m[0]*condMat[0][1]+m[1]*condMat[1][1]
              m=mtemp
          #Print conditional probabilities
          print "P(x_1=0|x_4=1)"
          print m[0]/(m[0]+m[1])
          print "P(x_1=1|x_4=1)"
          print m[1]/(m[0]+m[1])
```

```
In [24]: n = 1
          condMat = [[.6,.2],[.4,.8]]
          chainLen = 4
```

```
In [25]: P1GnChain(n,condMat,chainLen)
```

```
P(x_1=0|x_4=1)
0.490338164251
P(x_1=1|x_4=1)
0.509661835749
```

```
In [ ]:
```