EE18BTECH11026_A8

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1.1 EE18BTECH11026

1.2 ASSIGNMENT 08

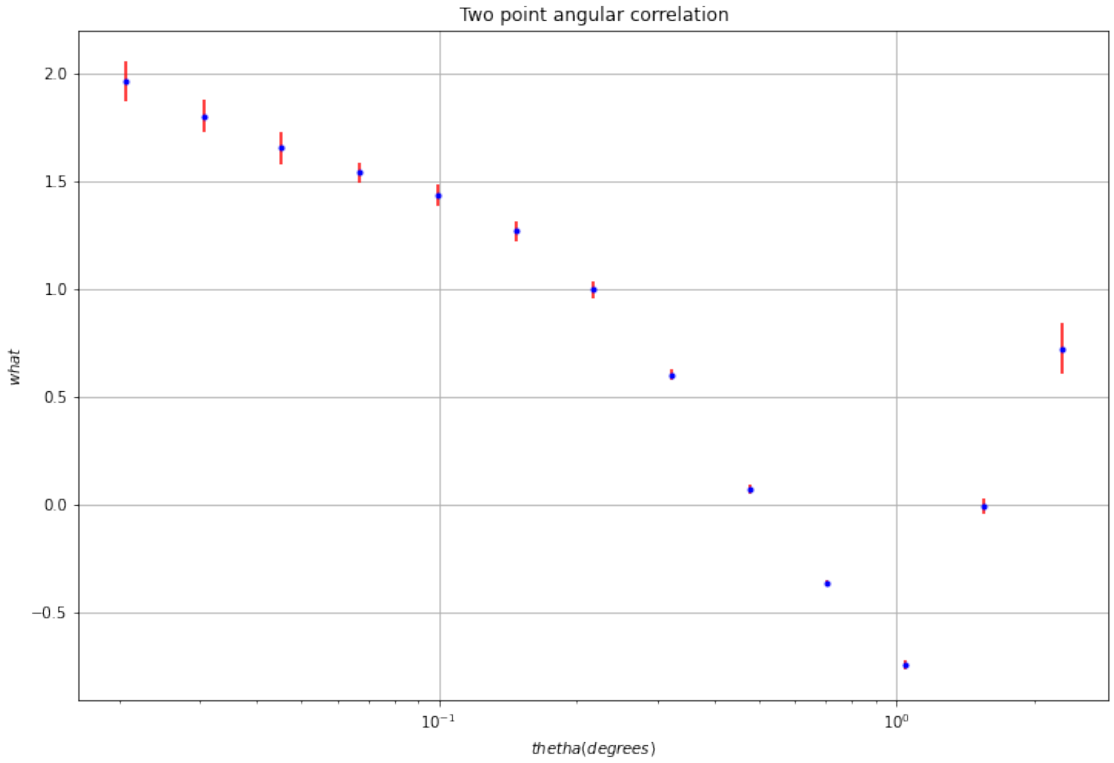
[16]:
```
import numpy as np
import matplotlib.pyplot as plt
import pandas as pd
from astroML.correlation import bootstrap_two_point_angular

np.random.seed(10)
data  = pd.read_csv('Q1_dat.txt', sep = '\s+')

### Filtering
data = data[data['r-mag']<20]
data = data[data['r-mag']>17]
data = data[data['spread_model']>0.002]

bins = 10 ** np.linspace(np.log10(1. / 60.), np.log10(6), 16)
correlation, err_correlation, bootstrap =␣
 ↪bootstrap_two_point_angular(data['#RA'],data['DEC'],bins=bins,method='landy-szalay',Nbootst

plt.figure(figsize=(12, 8))
bin_centers = 0.5 * (bins[1:] + bins[:-1])
plt.errorbar(bin_centers, correlation, err_correlation, fmt='.b', ecolor='red')
plt.xscale('log')
plt.yscale('linear')
plt.xlabel(r'$thetha(degrees)$')
plt.ylabel(r'$w hat$')
plt.grid()
plt.title('Two point angular correlation')
plt.show()
```


Two point angular correlation
2.0
1.5
1.0
0.5
0.0
−0.5
what
10^{-1}
10^{0}
thetha(degrees)

2 THE END