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CS20BTECH11063

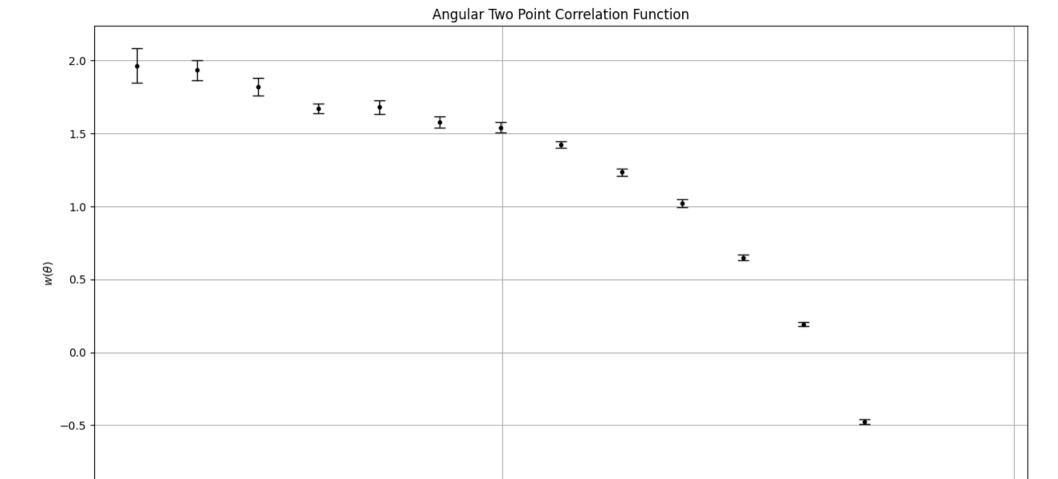
Data Science Analysis Assignment 8

```
In [1]: import numpy as np
        import matplotlib.pyplot as plt
        import scipy.stats as stats
        from scipy import optimize
        import astroML
        from astroML.stats import sigmaG
        import pandas as pd
        import seaborn as sns
        np.random.seed(0)
        import emcee
        import corner
        from sklearn.neighbors import KernelDensity
        from IPython.display import display, Math
        import dynesty
        import nestle
        from astroML.correlation import bootstrap two point angular
```

Q1

```
results = angular two point corr function(df)
bins = results[0]
corr = results[1]
corr_err = results[2]
nbootstraps = results[3]
bin centers = 0.5 * (bins[1:] + bins[:-1])
# Plotting the results
plt.figure(figsize=(15, 8))
plt.xscale('log')
plt.yscale('linear')
plt.errorbar(bin_centers, corr, yerr=corr_err, fmt='.k', capsize=5, lw=1)
plt.xlabel(r'$\theta$')
plt.ylabel(r'$w(\theta)$')
plt.title('Angular Two Point Correlation Function')
plt.grid()
plt.show()
plt.close()
```

(16,)



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