Refining a Plot With Matplotlib

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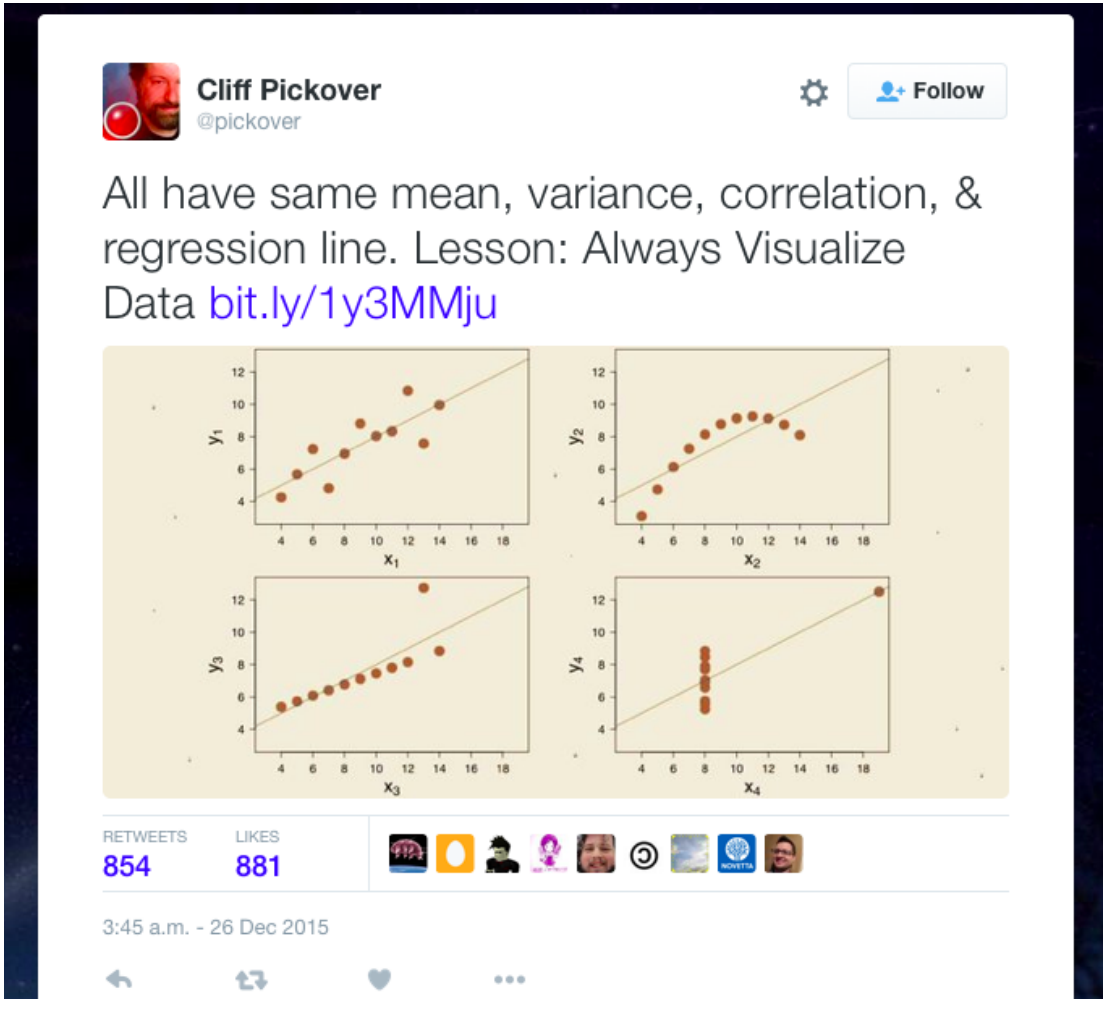
http://na.pycon.org

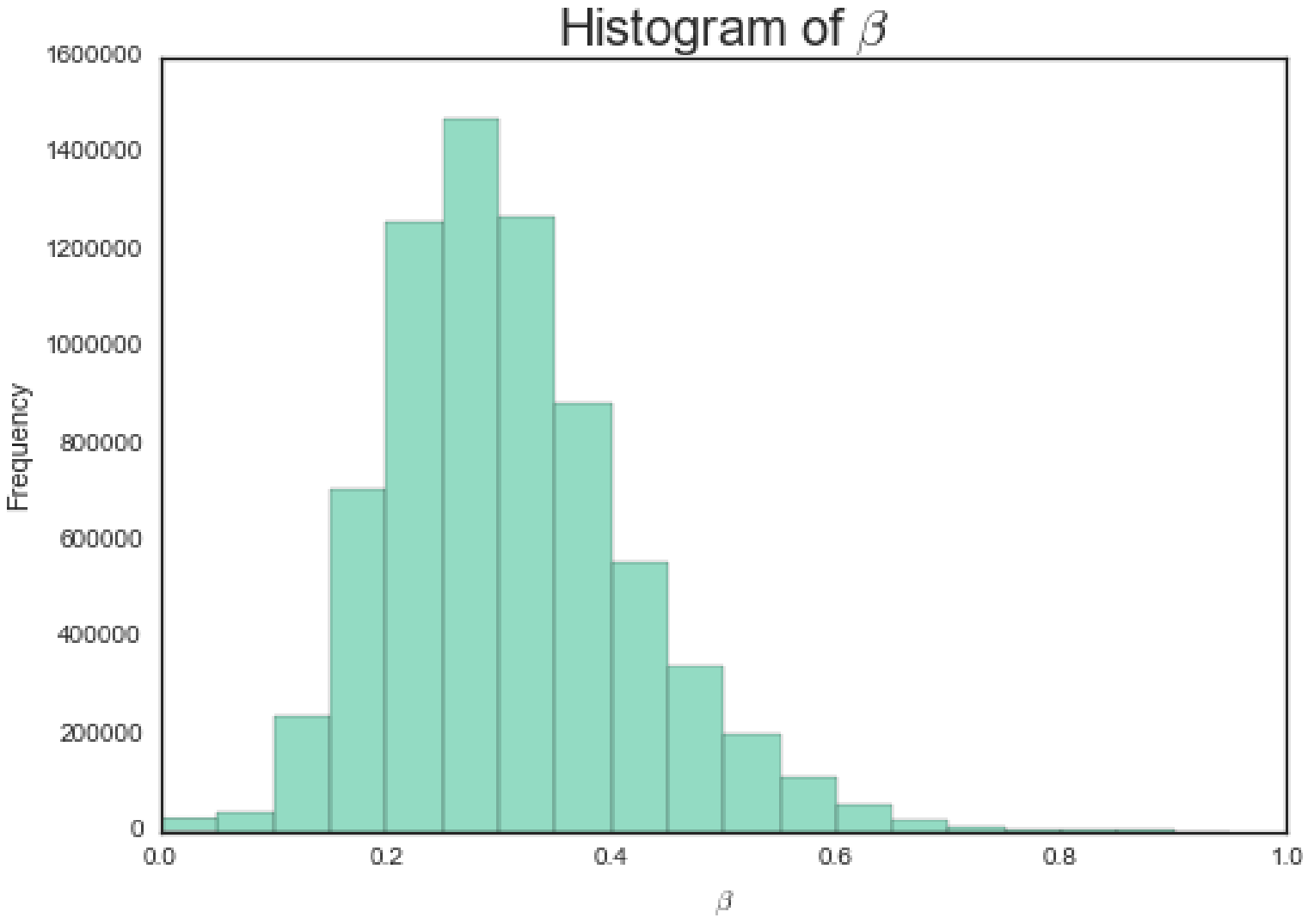
Anscombe's Quartet



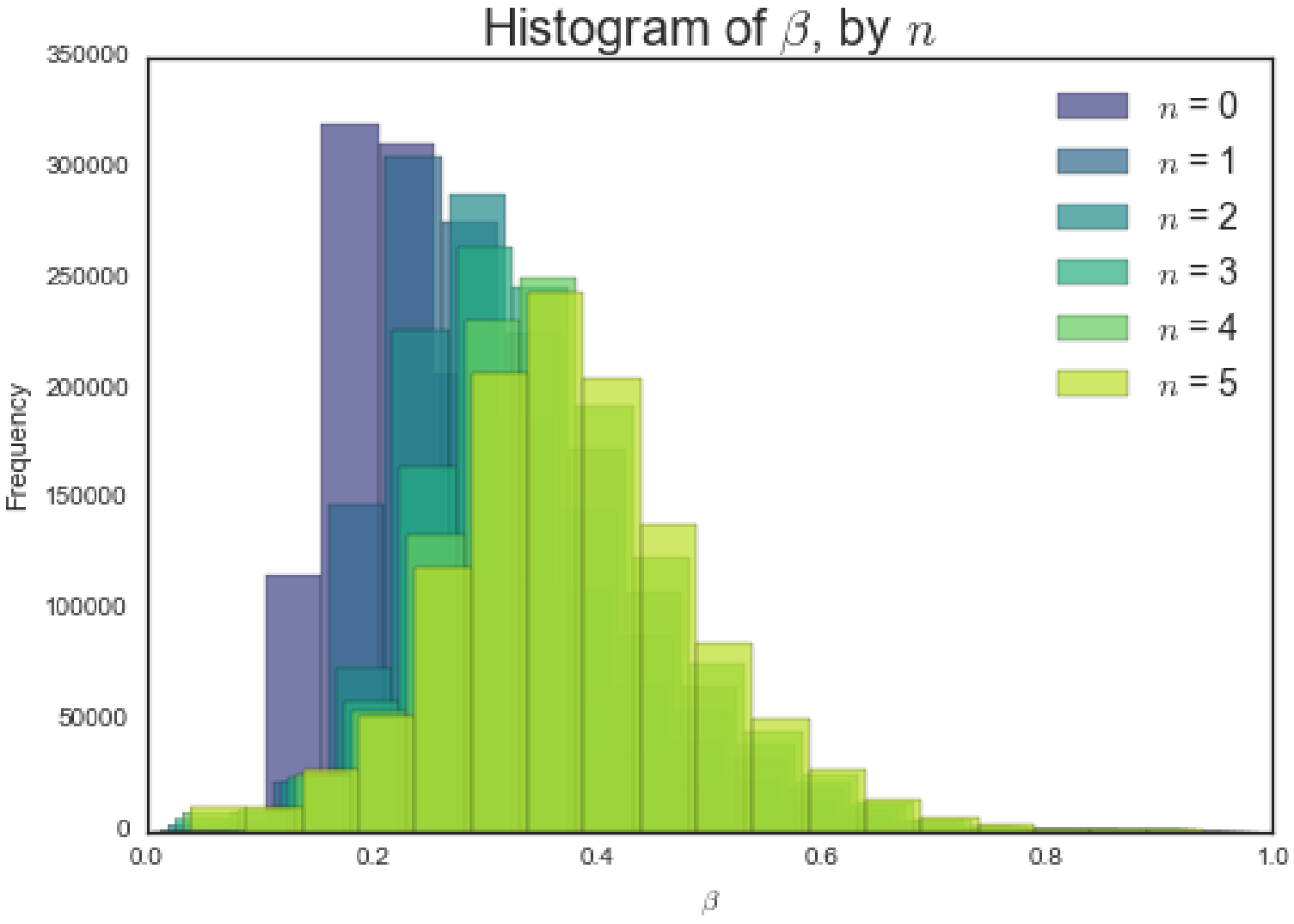
```
import matplotlib.pyplot as plt
import seaborn as sns
sns.set(style="white")

fig, ax = plt.subplots()
plt.hist(my_data)
plt.savefig('my_plot_name.png')
plt.show()
```

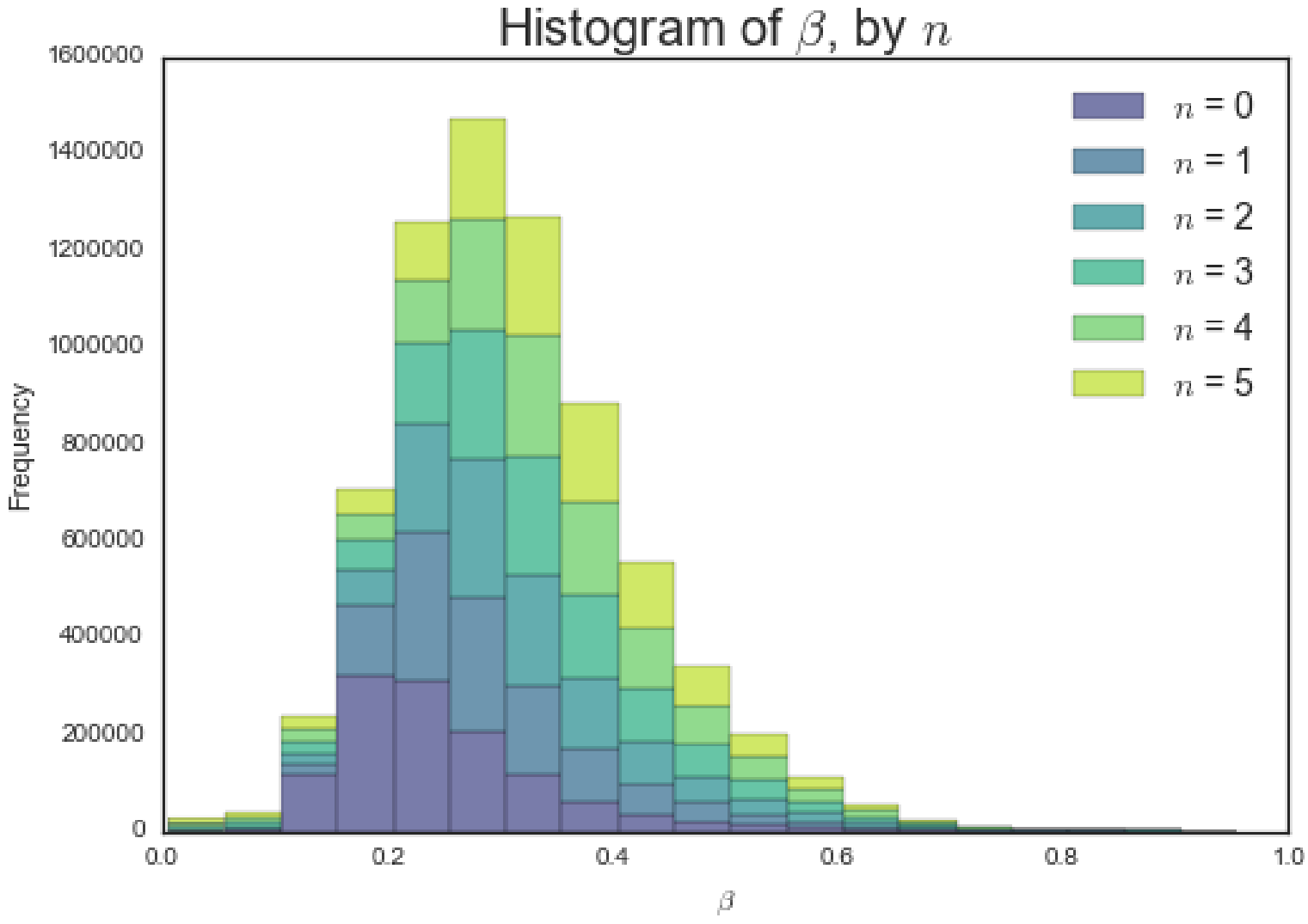
Histogram


Histogram of β
Frequency
1600000
1400000
1200000
1000000
800000
600000
400000
200000
0
0.0
0.2
0.4
0.6
0.8
1.0
β

Overlayed Histogram



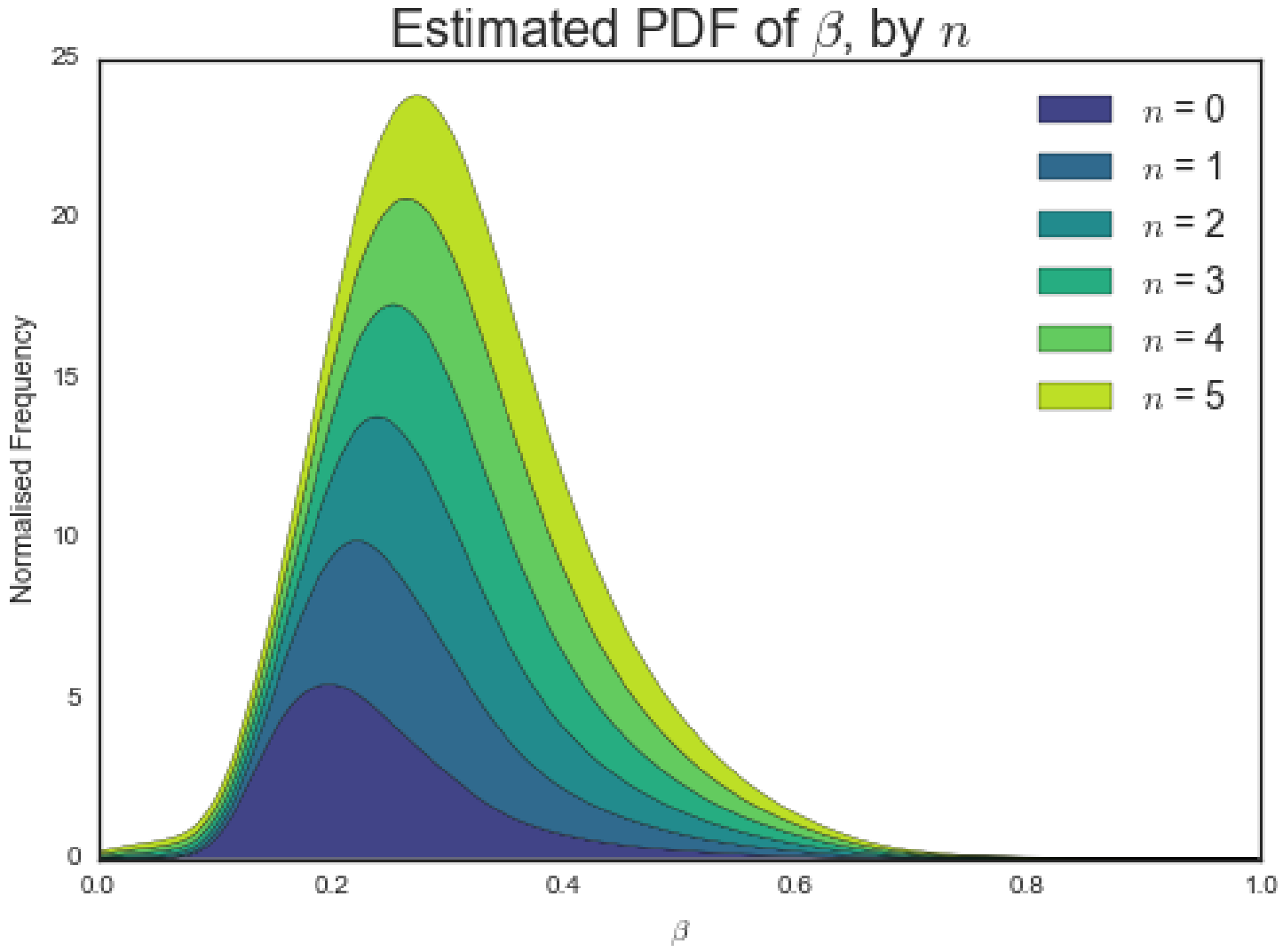
Stacked Histogram



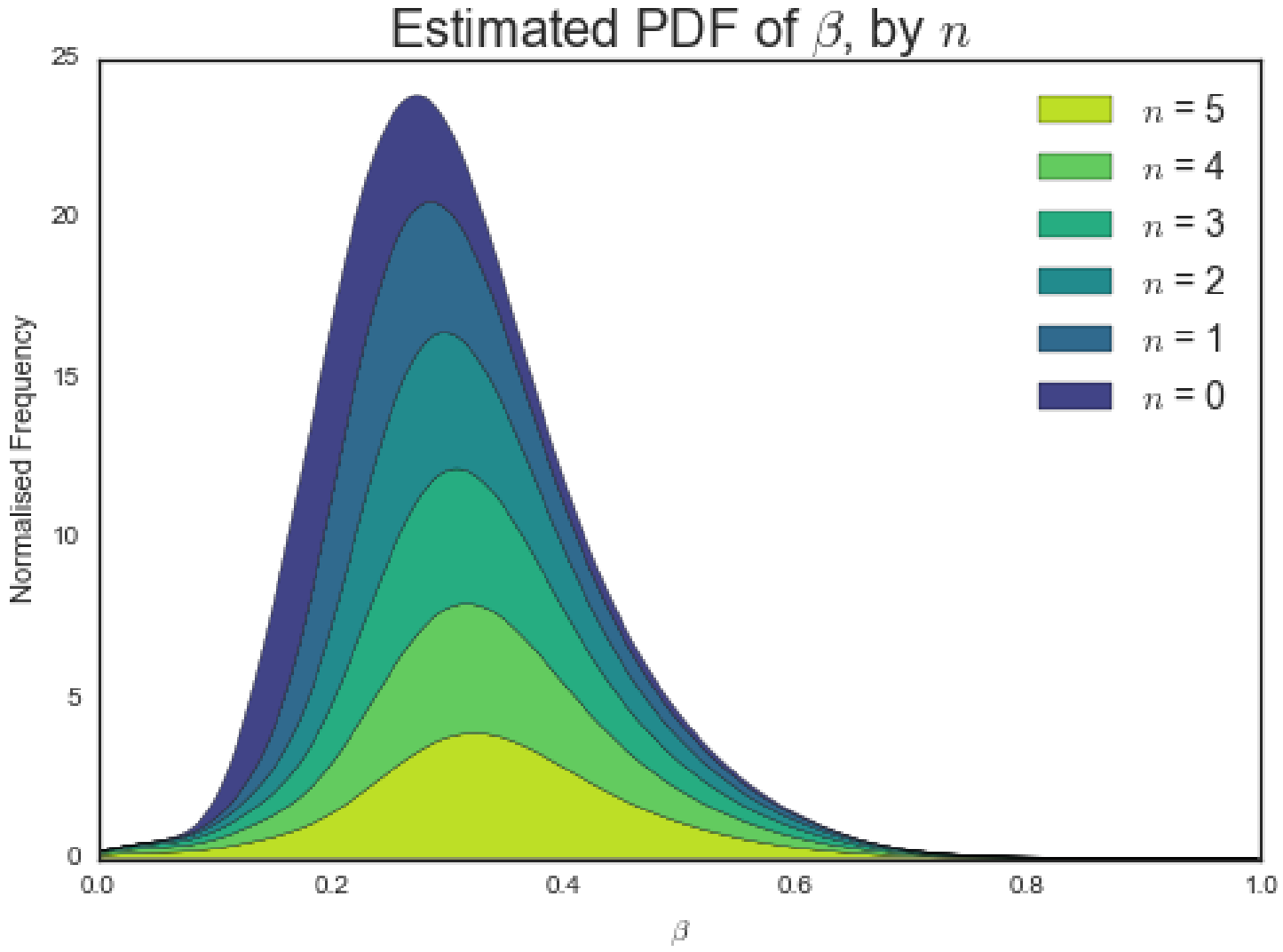
```
from scipy.stats import gaussian_kdesns.set(style="white")

densities = [gaussian_kde(row) for row in ratios_inverse_ns]
xs = [i/400.0 for i in range(400)]
ds = []
for dnsty in densities:
    dnsty.covariance_factor = lambda : 0.25
    dnsty._compute_covariance()
    ds.append(dnsty(xs))
```

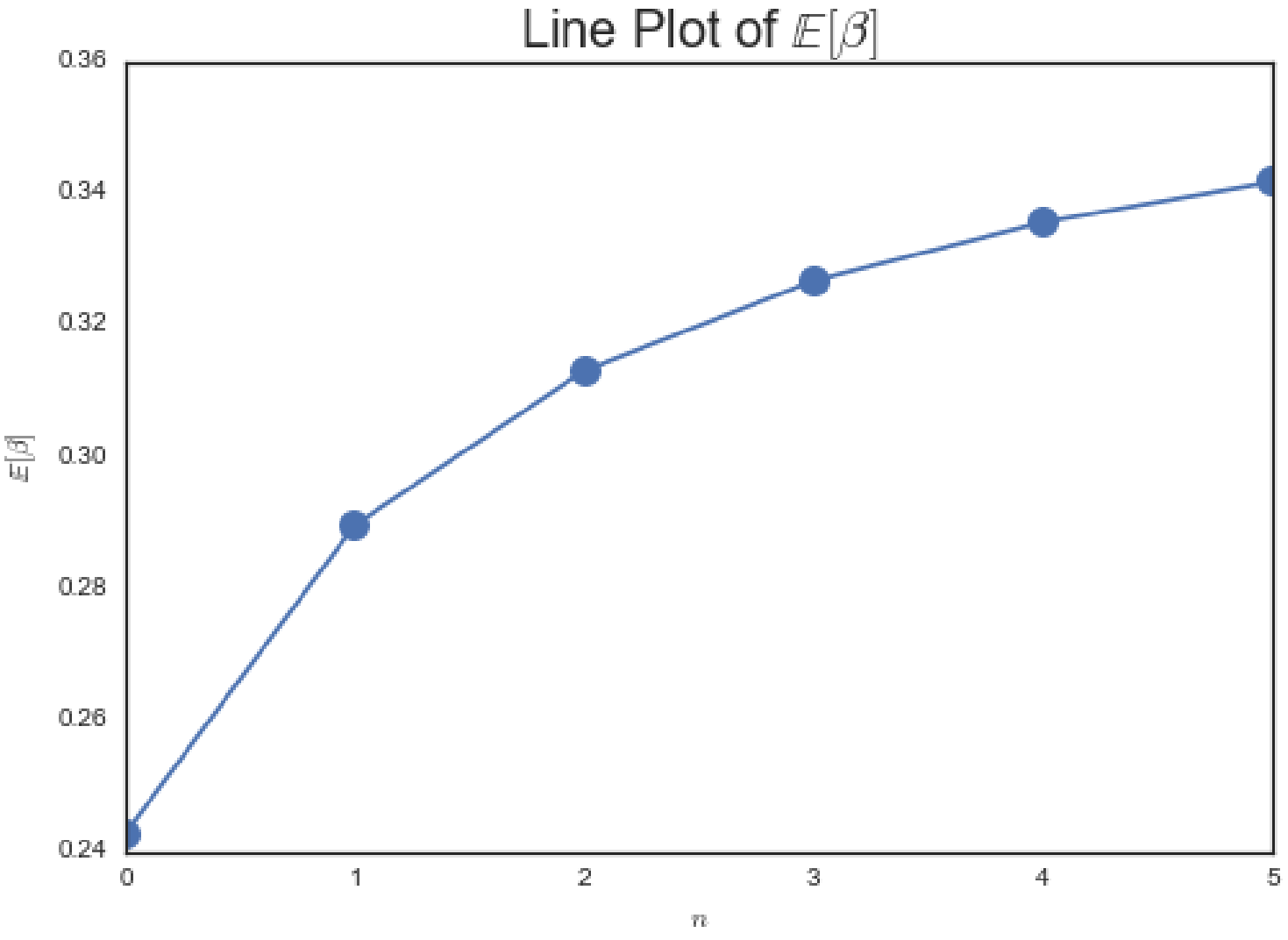
Estimated PDF



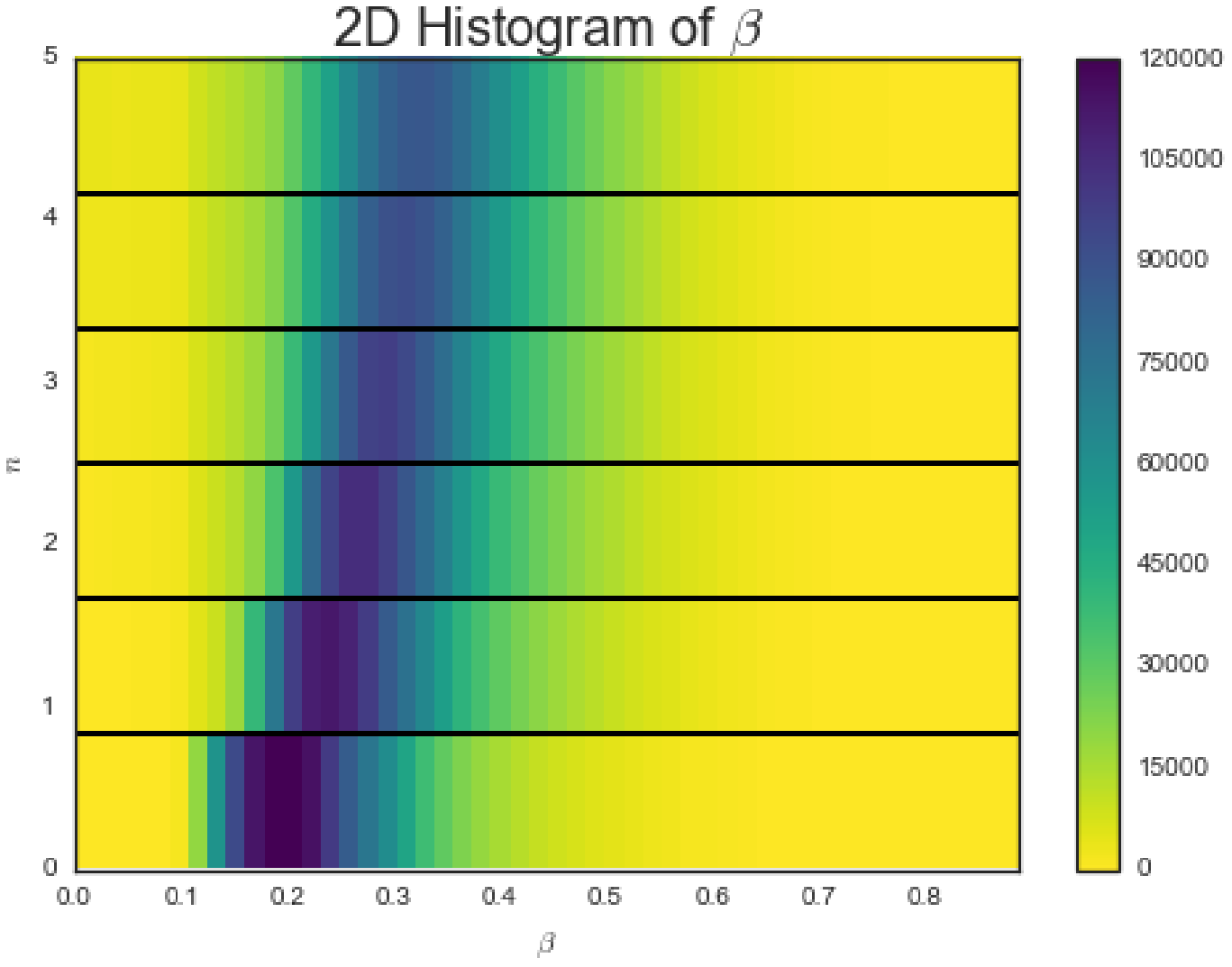
Estimated PDF



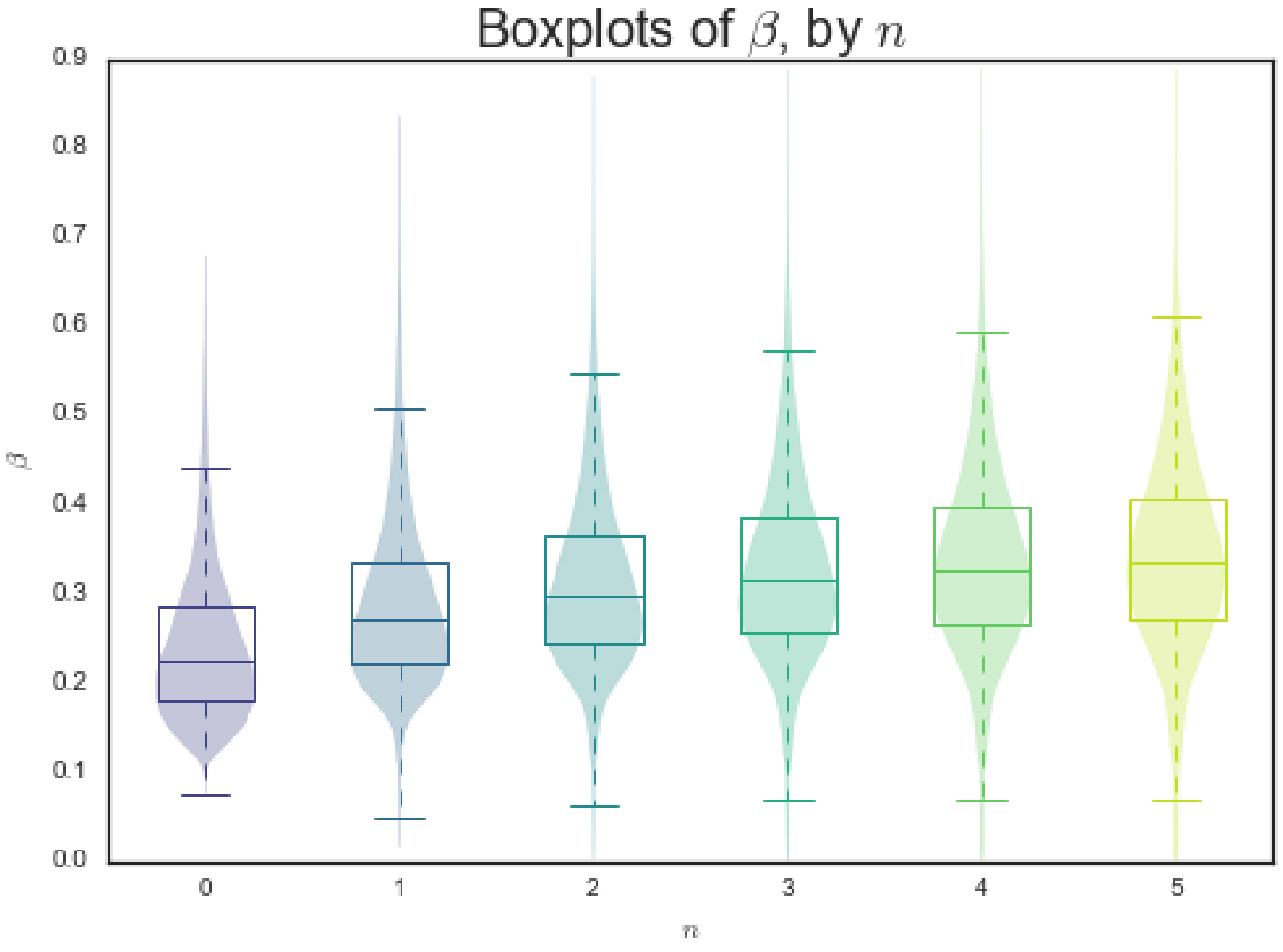
Line Plot


Line Plot of $\mathbb{E}[\beta]$
0.36
0.34
0.32
0.30
0.28
0.26
0.24
$\mathbb{E}[\beta]$
0
1
2
3
4
5
n

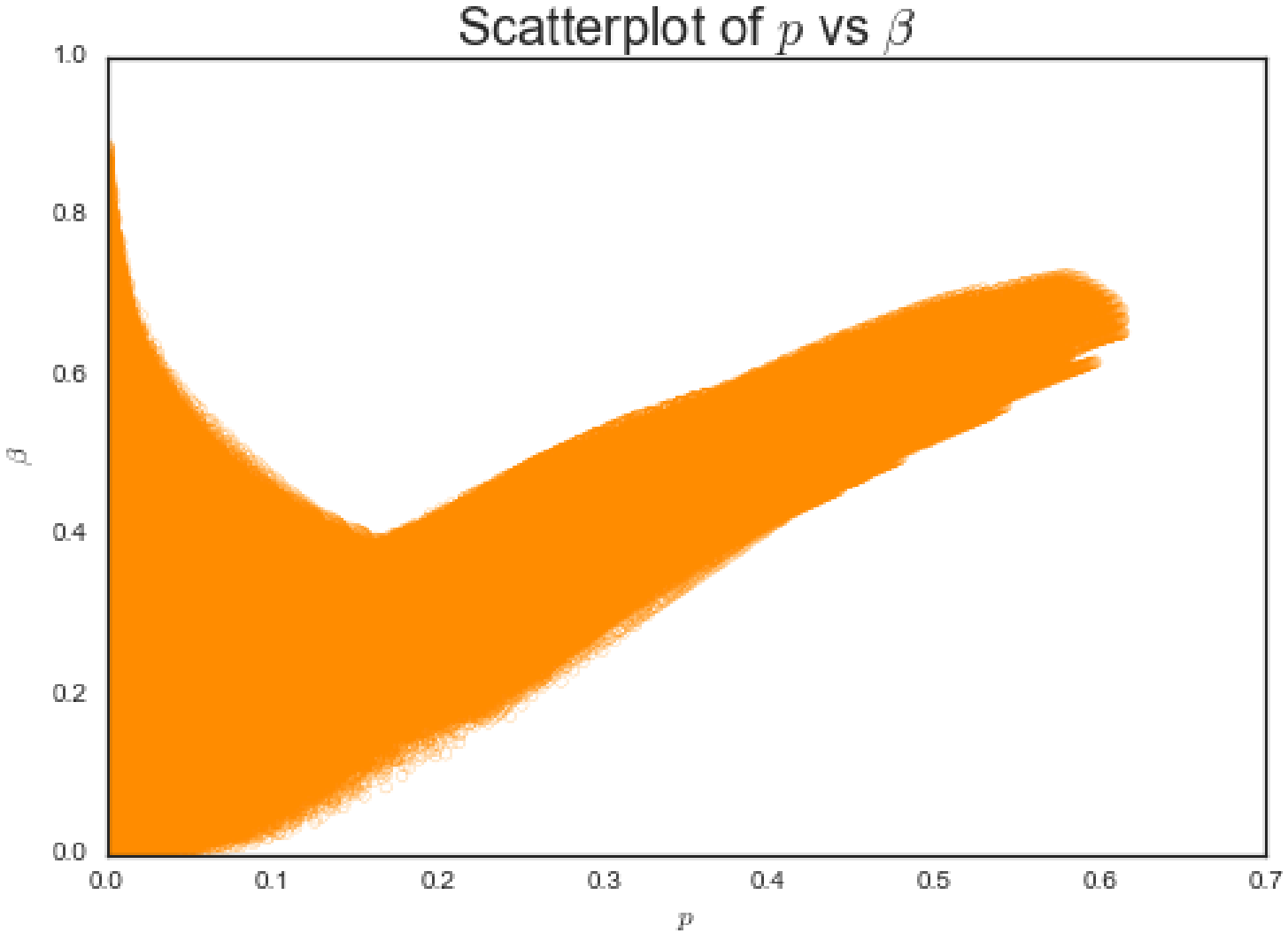
2D Histogram



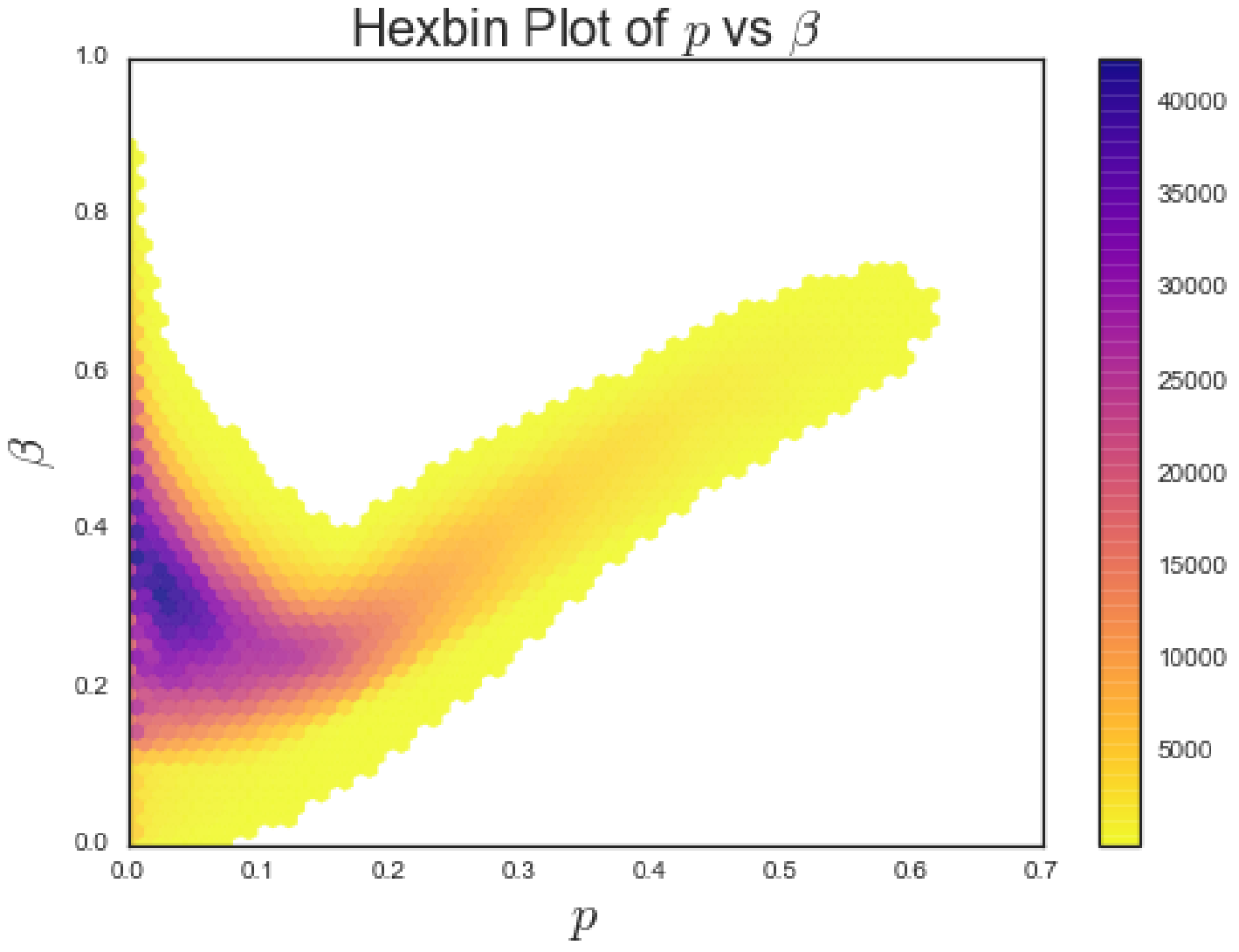
Violinplots & Boxplots



Scatterplot



Hexbin Plot


Hexbin Plot of p vs β
1.0
0.8
0.6
0.4
0.2
0.0
β
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
p
40000
35000
30000
25000
20000
15000
10000
5000

```
import numpy as np
arr, xed, yed = np.histogram2d(betas, ps, bins=30)
```

Contour Plot