RyanAveryHW8_1

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Reading in data

```
In [33]: import pandas as pd

         y = pd.read_csv('y.txt', sep='\s+', header=None).set_index(0).rename(columns={1: 'y'})
         x = pd.read_csv('x.txt', sep='\s+', header=None).set_index(0).rename(columns={1: 'x'})
         df = pd.concat([x,y],axis=1)
         df
```

1. Interpolation Methods

Cubic appears to have the best result judging by the higher correlation.

```
In [45]: df.interpolate(method='linear', axis=0).corr()

Out[45]:           x         y
         x  1.000000  0.787641
         y  0.787641  1.000000

In [46]: df.interpolate(method='nearest', axis=0).corr()

Out[46]:           x         y
         x  1.000000  0.781683
         y  0.781683  1.000000

In [47]: df.interpolate(method='cubic', axis=0).corr()

Out[47]:           x         y
         x  1.000000  0.790044
         y  0.790044  1.000000

In [58]: df.interpolate(method='spline', order=2, axis=0).corr()

Out[58]:           x         y
         x  1.000000  0.744164
         y  0.744164  1.000000
```

2.