Evaluation of pipeline

June 23, 2016

In [2]:
```
# Render our plots inline
%matplotlib inline

import pandas as pd
import matplotlib.pyplot as plt
import numpy as np
from __future__ import division
pd.set_option('display.mpl_style', 'default') # Make the graphs a bit prett
plt.rcParams['figure.figsize'] = (15, 5)
```

```
c:\python27\lib\site-packages\IPython\core\interactiveshell.py:2885: FutureWarning:
mpl_style had been deprecated and will be removed in a future version.
Use `matplotlib.pyplot.style.use` instead.

  exec(code_obj, self.user_global_ns, self.user_ns)
```

In [22]:
```
evaluation = pd.read_csv('C:/Python27/evaluation/ev_analysis2.csv')
```

In [23]:
```
evaluation[:5]
```

Out[23]:

	ID	ev1	ev2	ev5	vader	vader_stars	humans_stars	Difference
0	1236227	0.8	0.8	0.5	0.59	4.5	5.0	-0.5
1	1682867	0.3	-0.4	-0.3	-0.21	2.5	2.5	0.0
2	1337038	0.7	0.9	0.8	0.88	5.0	5.0	0.0
3	1354077	0.4	0.4	0.3	0.27	4.0	4.0	0.0
4	1525367	0.5	0.9	0.4	0.67	4.5	4.5	0.0

In [24]:
```
SSD=evaluation['Difference'].pow(2).sum()
n=evaluation['Difference'].count()
MSE=SSD/n
RMSE=np.sqrt(MSE)
RMSE
```

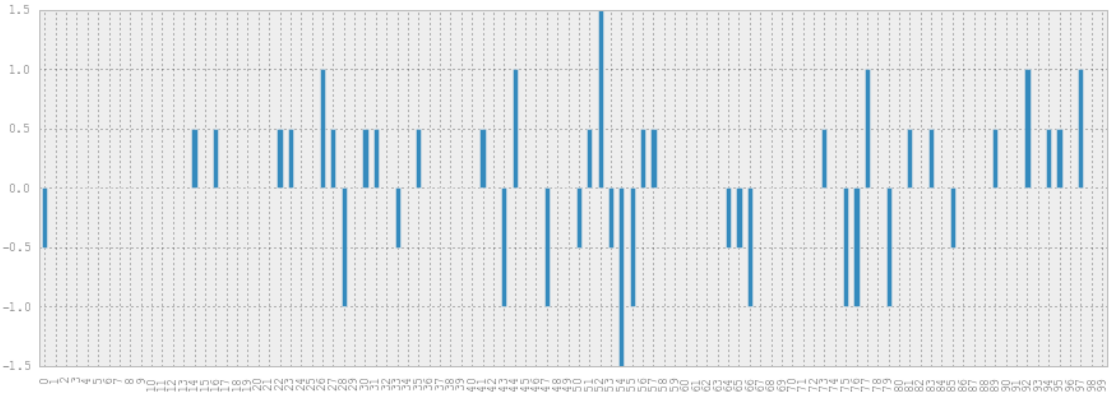
Out[24]:
```
0.48733971724044817
```

In [25]:
```
evaluation['humans_stars'].std()
```

Out[25]:
```
0.81765555465648621
```

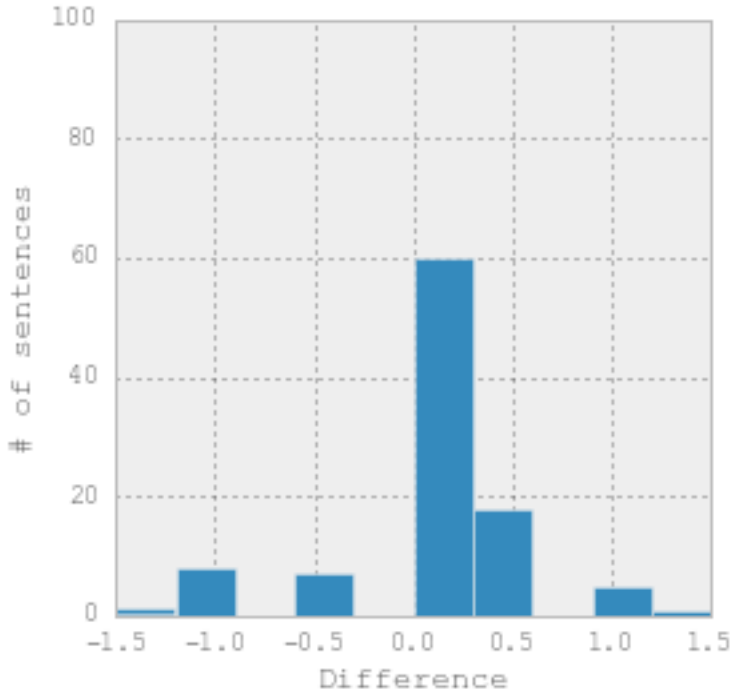
```
In [26]: evaluation['Difference'].plot(kind='bar')
```

```
Out[26]: <matplotlib.axes._subplots.AxesSubplot at 0x8946290>
```

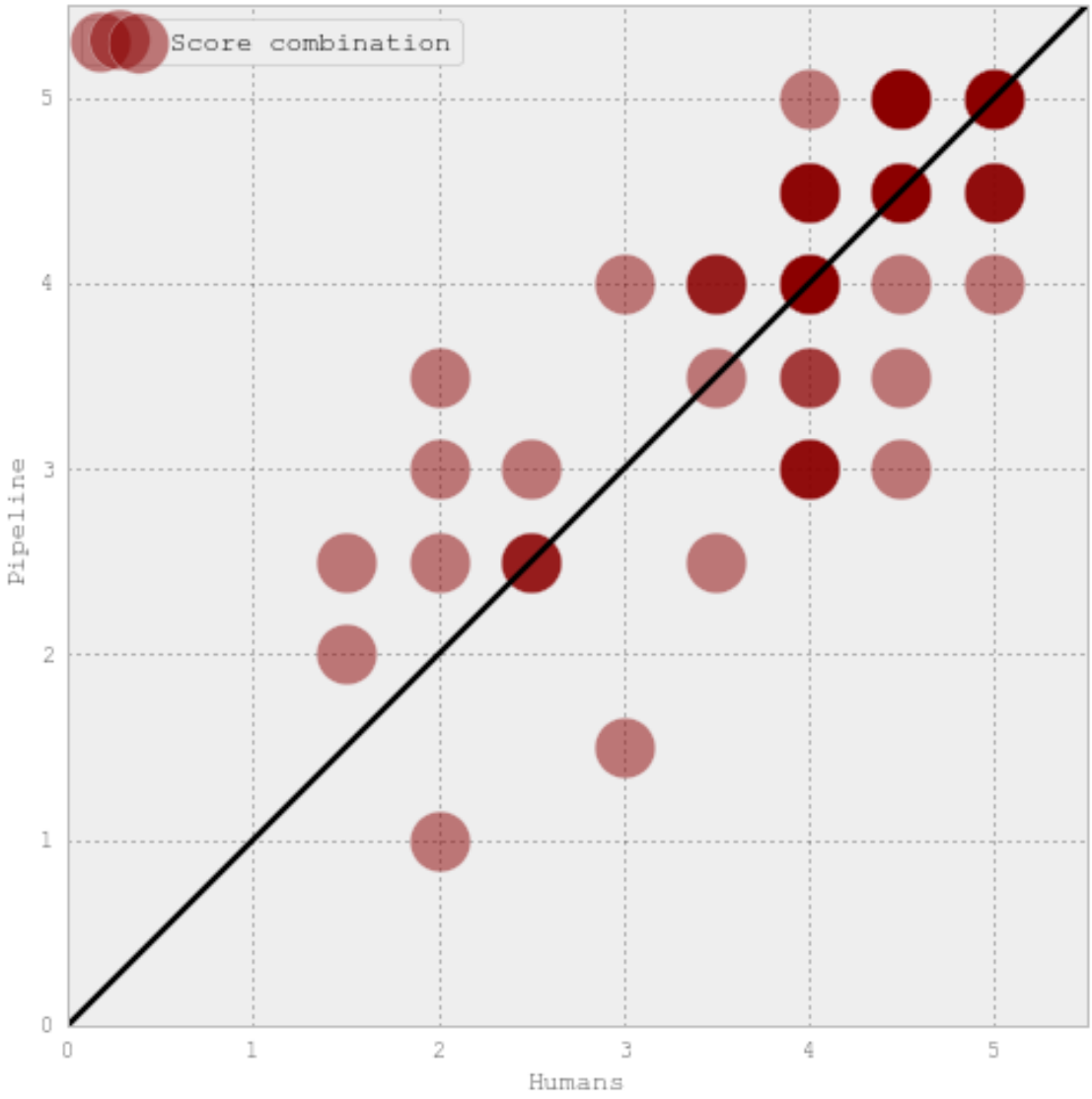


```
In [27]: evaluation['Difference'].hist(figsize=(4,4))
         plt.axis([-1.5, 1.5, 0, 100])
         plt.xlabel('Difference')
         plt.ylabel('# of sentences')
```

```
Out[27]: <matplotlib.text.Text at 0x8662490>
```



```
In [28]: evaluation['Difference'].value_counts(normalize=True)

Out[28]:  0.0    0.60
          0.5    0.18
         -1.0    0.08
         -0.5    0.07
          1.0    0.05
         -1.5    0.01
          1.5    0.01
         Name: Difference, dtype: float64

In [29]: print 'Mean ',evaluation['Difference'].mean().round(3)
         print 'STD',evaluation['Difference'].std().round(3)

Mean  0.025
STD 0.489


In [43]: evaluation['Difference'].mean()

Out[43]: 0.025000000000000001

In [42]: fx = evaluation.plot(kind='scatter', x='humans_stars', y='vader_stars', co
                              label='Score combination', s=700, alpha=0.5, figsize=
         line = plt.plot([0,1,2,3,4,5,6], [0,1,2,3,4,5,6])
         plt.axis([0, 5.5, 0, 5.5])
         plt.setp(line, color='Black', linewidth=2.5)
         plt.xlabel('Humans')
         plt.ylabel('Pipeline')
         plt.show()
```



In [ ]: