CNN with Rotten Tomatoes Positive and Negative Reviews

1. Output of original dataset:

```
2018-04-14T03:42:46.142379: step 192, loss 1.24075, acc 0.609375
2018-04-14T03:42:46.347406: step 193, loss 0.949587, acc 0.578125
2018-04-14T03:42:46.548211: step 194, loss 0.680566, acc 0.625
2018-04-14T03:42:46.754350: step 195, loss 0.822199, acc 0.59375
2018-04-14T03:42:46.960817: step 196, loss 1.22448, acc 0.5625
2018-04-14T03:42:47.160760: step 197, loss 0.819723, acc 0.703125
2018-04-14T03:42:47.373896: step 198, loss 0.949806, acc 0.640625
2018-04-14T03:42:47.573222: step 199, loss 0.754511, acc 0.703125
2018-04-14T03:42:47.781214: step 200, loss 0.795034, acc 0.640625

Evaluation:
2018-04-14T03:42:48.535120: step 200, loss 0.709295, acc 0.585366
```

2. TensorBoard Visualization:
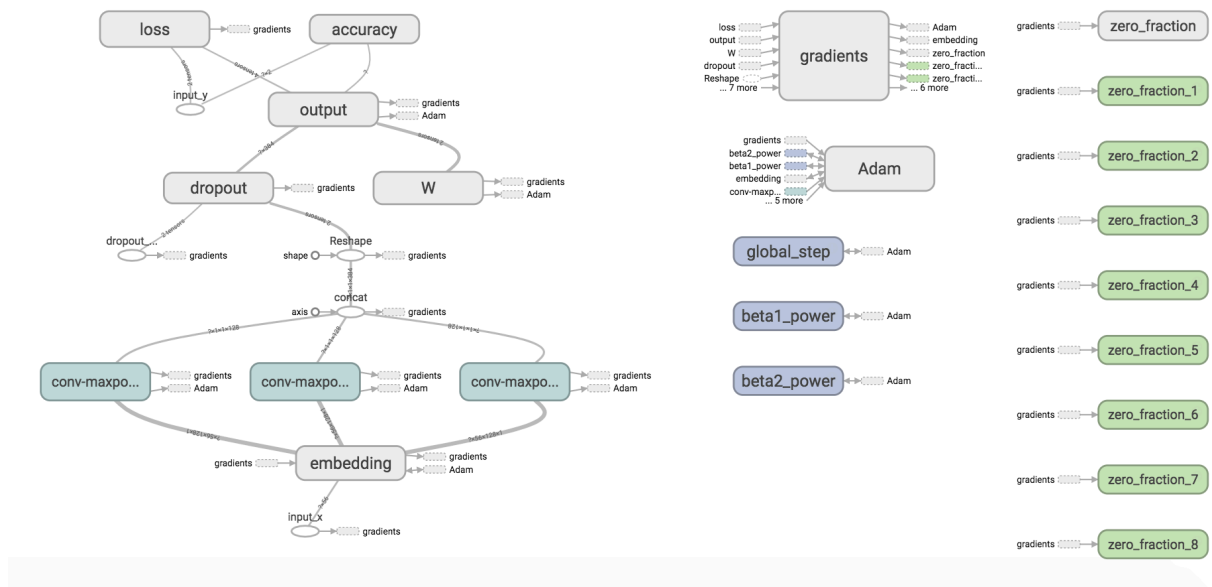
3. Changing Filter sizes to 5,6,7

```
2018-04-14T03:49:14.050503: step 191, loss 1.12288, acc 0.53125
2018-04-14T03:49:14.328484: step 192, loss 0.989402, acc 0.609375
2018-04-14T03:49:14.592916: step 193, loss 1.3051, acc 0.515625
2018-04-14T03:49:14.872774: step 194, loss 1.18262, acc 0.59375
2018-04-14T03:49:15.181171: step 195, loss 1.20397, acc 0.546875
2018-04-14T03:49:15.439597: step 196, loss 1.15799, acc 0.515625
2018-04-14T03:49:15.756866: step 197, loss 0.594452, acc 0.71875
2018-04-14T03:49:16.119699: step 198, loss 1.23636, acc 0.53125
2018-04-14T03:49:16.470720: step 199, loss 1.18479, acc 0.5625
2018-04-14T03:49:16.791350: step 200, loss 0.972003, acc 0.609375

Evaluation:
2018-04-14T03:49:19.044967: step 200, loss 0.748586, acc 0.594278
```

We see that the loss is slightly higher after 200 epochs compared to the original code
and the accuracy is about the same

4. Changing Learning Rate to 0.01

```
2018-04-14T03:56:55.866033: step 192, loss 0.663444, acc 0.78125
2018-04-14T03:56:56.079324: step 193, loss 0.250141, acc 0.875
2018-04-14T03:56:56.282042: step 194, loss 0.574669, acc 0.75
2018-04-14T03:56:56.485257: step 195, loss 0.412485, acc 0.8125
2018-04-14T03:56:56.694801: step 196, loss 0.527113, acc 0.828125
2018-04-14T03:56:56.907053: step 197, loss 0.450316, acc 0.78125
2018-04-14T03:56:57.123376: step 198, loss 0.627999, acc 0.765625
2018-04-14T03:56:57.325459: step 199, loss 0.492769, acc 0.765625
2018-04-14T03:56:57.568698: step 200, loss 0.391412, acc 0.8125

Evaluation:
2018-04-14T03:56:59.108536: step 200, loss 0.715388, acc 0.697467
```

Changing the learning rate decreases the accuracy slightly and increases the loss slightly

5. Changing the learning Rate to 0.1

```
2018-04-14T03:59:07.186187: step 192, loss 31.7316, acc 0.609375
2018-04-14T03:59:07.436954: step 193, loss 49.9038, acc 0.625
2018-04-14T03:59:07.649676: step 194, loss 45.7891, acc 0.640625
2018-04-14T03:59:07.847500: step 195, loss 42.8754, acc 0.546875
2018-04-14T03:59:08.048663: step 196, loss 53.4879, acc 0.515625
2018-04-14T03:59:08.251401: step 197, loss 80.5682, acc 0.4375
2018-04-14T03:59:08.456349: step 198, loss 24.8453, acc 0.609375
2018-04-14T03:59:08.662820: step 199, loss 35.5324, acc 0.65625
2018-04-14T03:59:08.861081: step 200, loss 79.3143, acc 0.484375

Evaluation:
2018-04-14T03:59:10.482101: step 200, loss 42.4765, acc 0.525328
```

The loss here is significantly higher and the accuracy lower.