# Yelp Dataset

## Random Classifier

**Training F1-Measure**

F1 Score: 0.180419612228

Confusion Matrix:

[[104 102 114 97 105]

[115 134 136 124 132]

[225 197 183 195 197]

[490 496 481 487 514]

[459 486 461 479 487]]

**Validation F1-Measure**

F1 Score: 0.169737750897

Confusion Matrix:

[[15 16 15 22 16]

[12 21 22 21 20]

[47 33 24 28 32]

[71 74 78 67 66]

[69 72 47 55 57]]

**Test F1-Measure**

F1 Score: 0.186163692511

Confusion Matrix:

[[ 38 31 28 25 21]

[ 41 36 34 34 45]

[ 60 48 58 76 58]

[148 157 134 124 139]

[119 149 124 125 148]]

## Most Frequent Classifier Score

**Training F1-Measure**

F1 Score: 0.104267004647

Confusion Matrix:

[[ 0 0 0 522 0]

[ 0 0 0 641 0]

[ 0 0 0 997 0]

[ 0 0 0 2468 0]

[ 0 0 0 2372 0]]

**Validation F1-Measure**

F1 Score: 0.105014749263

Confusion Matrix:

[[ 0 0 0 84 0]

[ 0 0 0 96 0]

[ 0 0 0 164 0]

[ 0 0 0 356 0]

[ 0 0 0 300 0]]

**Test F1-Measure**

F1 Score: 0.103923019985

Confusion Matrix:

[[ 0 0 0 143 0]

[ 0 0 0 190 0]

[ 0 0 0 300 0]

[ 0 0 0 702 0]

[ 0 0 0 665 0]]

## Bernoulli Naive Bayes

**Training F1-Measure**

F1 Score: 0.580313605691

Confusion Matrix:

[[ 274 5 17 22 204]

[ 9 320 28 85 199]

[ 10 27 474 157 329]

[ 36 144 83 1237 968]

[ 50 121 75 247 1879]]

**Validation F1-Measure**

F1 Score: 0.326966475705

Confusion Matrix:

[[ 27 12 5 6 34]

[ 9 17 11 27 32]

[ 4 21 28 55 56]

[ 9 29 27 119 172]

[ 11 22 14 64 189]]

**Test F1-Measure**

F1 Score: 0.342970426948

Confusion Matrix:

[[ 40 24 6 21 52]

[ 20 47 33 29 61]

[ 11 34 47 94 114]

[ 9 58 63 250 322]

[ 10 38 24 153 440]]

## Decision Tree

**Training F1-Measure**

F1 Score: 1.0

Confusion Matrix:

[[ 522 0 0 0 0]

[ 0 641 0 0 0]

[ 0 0 997 0 0]

[ 0 0 0 2468 0]

[ 0 0 0 0 2372]]

**Validation F1-Measure**

F1 Score: 0.261495450896

Confusion Matrix:

[[ 16 15 15 14 24]

[ 14 10 24 22 26]

[ 12 18 40 57 37]

[ 19 35 56 135 111]

[ 20 15 33 115 117]]

**Test F1-Measure**

F1 Score: 0.279169541182

Confusion Matrix:

[[ 29 21 31 34 28]

[ 28 23 45 59 35]

[ 17 30 59 127 67]

[ 35 39 97 298 233]

[ 22 38 60 251 294]]