SVM:

NOTE: All the models use Gaussian kernel. The first value is for C, second for gamma.

MODEL 1	Recall	F1	Precision	Accuracy
50 words 100, 0.001	94.27%	94.67%	95.15%	94.74%
100 words 10, 0.001	94.77%	95.68%	96.68%	95.77%
500 words 100, 0.001	95.43%	96.74%	98.16%	96.82%
1000 words 100, 0.0001	95.50%	96.69%	97.96%	96.76%
3000 words 1000, 'auto'	94.75%	96.35%	98.10%	96.46%

MODEL 2	Recall	F1	Precision	Accuracy
50 words 100, 0.001	94.73%	95.40%	96.15%	95.47%
100 words 10, 0.001	94.62%	95.90%	97.29%	96.01%
500 words 10, 0.001	95.39%	96.77%	98.27%	96.86%
1000 words 100, 0.0001	95.21%	96.47%	97.84%	96.56%
3000 words 1000, 'auto'	94.40%	96.13%	98.02%	96.25%

MODEL 3	Recall	F1	Precision	Accuracy
50 words 10, 0.001	93.83%	95.50%	97.35%	95.64%
100 words 10, 0.001	94.64%	95.89%	97.25%	95.99%
500 words 10, 0.001	95.21%	96.70%	98.30%	96.79%
1000 words 1000, 'auto'	95.12%	96.54%	98.06%	96.63%
3000 words 1000, 'auto'	94.42%	96.09%	97.94%	96.22%