

Precision, Recall and F-measure varies between 0.58 to 0.821, 0.333 to 0.979 and 0.258 to 0.893 respectively for Random Tree.

Table 4.4 Result Evaluation for Naïve Bayes

Precision	Recall	F-Measure	Class
1.000	0.974	0.987	P1
0.644	0.885	0.746	P2
0.769	0.384	0.512	P3
0.333	0.434	0.377	P4
0.593	0.682	0.635	P5

Precision, Recall and F-measure varies between 0.33 to 1.00, 0.434 to 0.974 and 0.377 to 0.987 respectively for Naïve Bayes.

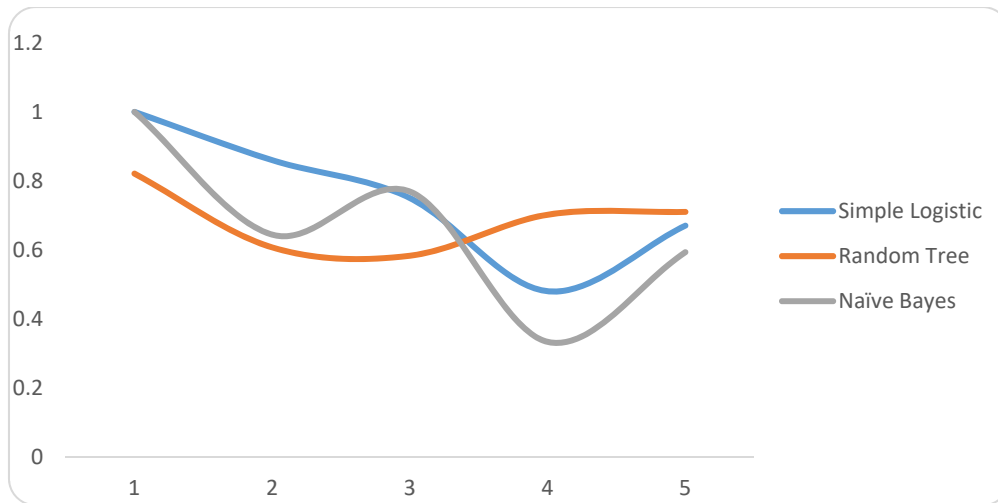


Figure 3.2 Precision comparison

Figure 3.2 shows the precision comparison of all the three classifiers.

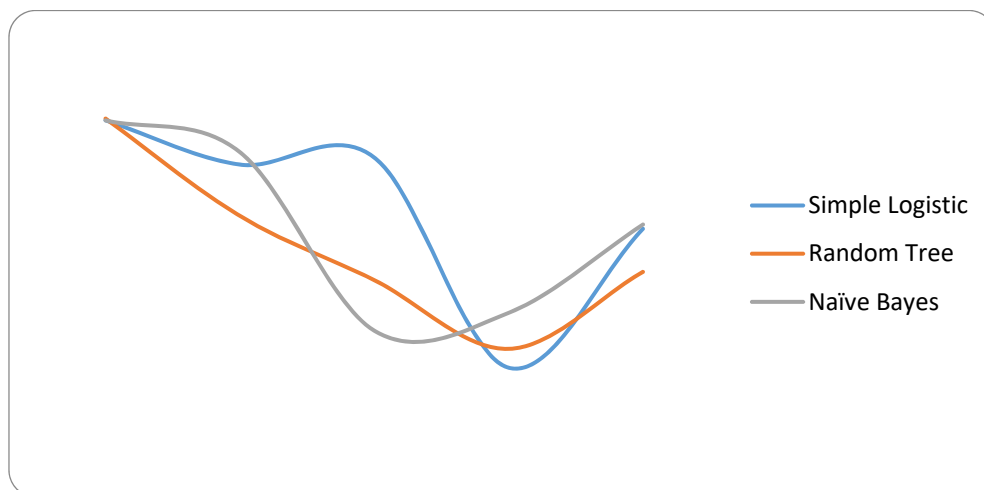


Figure 3.3 Recall comparison

Figure 3.3 shows the recall comparison of all the three classifiers.

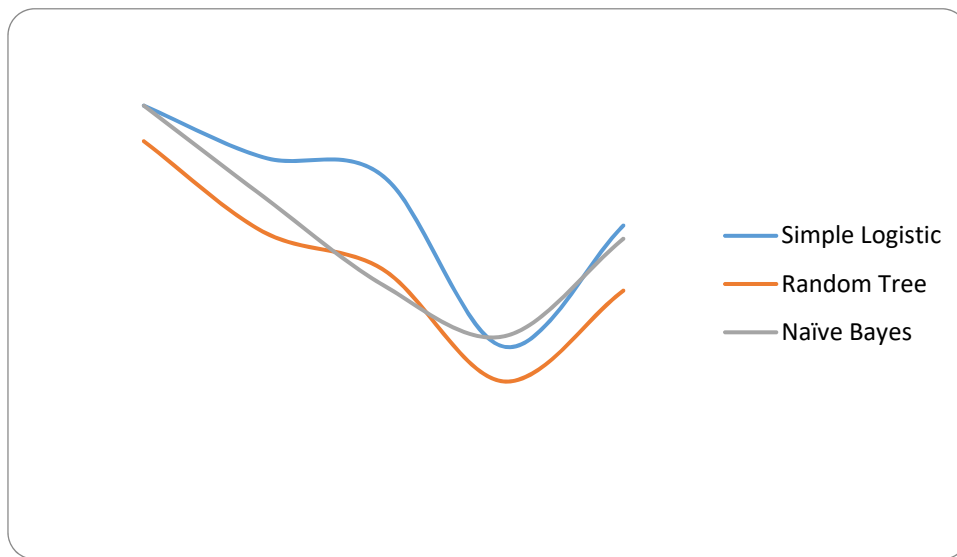


Figure 3.4 F-measure comparison

Figure 3.4 shows the F-measure comparison of all the three classifiers.

Predicting the priority of bug reports is carried out using different classification algorithms such as Naïve bayes, Random tree and simple logistic. For the given datasets simple logistic gives better accuracy over other two algorithms. Results also evaluated using other measures such as Precision, Recall, F-measure and ROC Area. From the table 17-19, we can see that Simple Logistic gives better result over other two algorithms.

5. Conclusion and Future Work

Open source repositories lot of bug reports are submitted by all around the world by user and developer. In order to prioritize which bug to be fixed first based on the priority, we need priority information. Even though, the priority is assigned by developer, sometimes it may incorrect, because of busy schedule or inexperienced developer. That time, developer can use this recommendation system for more accurate priority assignment and also time may be saved.

Predicting the priority of bug reports is done using different classification algorithms such as Naïve bayes, Random Tree and Simple logististics. Simple logististics gives good accuracy comparing to other two.

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