- Assignment 2:

TF-TDI Model:

Models	SVM	Logistic Regression	Naïve Bayes
Accuracy	0.835	0.835	0.825

- Assignment 3:

Word2vec:

First Experiment:

Vector Size = 1000, Window = 6, Min Count = 4, Workers = 4

Models	SVM	Logistic Regression	Naïve Bayes
Accuracy	0.7925	0.785	0.708

Second Experiment:

Vector Size = 5000, Window = 6, Min Count = 4, Workers = 4

Models	SVM	Logistic Regression	Naïve Bayes
Accuracy	0.7925	0.780	0.662

Note:

In Experiment 1,2:

When Vector Size increasing, Accuracy at SVM increasing lightly, but decreasing in Logistic Regression and Naive Bayes

Third Experiment:

Vector Size = 1000, Window = 30, Min Count = 4, Workers = 4

Models	SVM	Logistic Regression	Naïve Bayes
Accuracy	0.82	0.807	0.660

Fourth Experiment:

Vector Size = 1000, Window = 15, Min Count = 4, Workers = 4

Models	SVM	Logistic Regression	Naïve Bayes
Accuracy	0.7875	0.787	0.655

Note:

In Experiment 3,4:

When Windows increasing to specific number , Accuracy increasing

Fifth Experiment:

Vector Size = 1000, Window = 6, Min Count = 10, Workers = 4

Models	SVM	Logistic Regression	Naïve Bayes
Accuracy	0.7875	0.777	0.662

Sixth Experiment:

Vector Size = 2000, Window = 10, Min Count = 4,

Workers =4,epochs= 60

Models	SVM	Logistic Regression	Naïve Bayes
Accuracy	0.845	0.845	0.777

Note:

In Experiment 1,5:

When Min Count increasing, Accuracy increasing at naïve bayes, Accuracy decreasing at SVM and Accuracy increasing at logistic regression

Best model :

Logistic Regression and SVM with accuracy 84% , Vector Size = 2000, Window = 10, Min Count = 4, Workers = 4 , epochs = 60