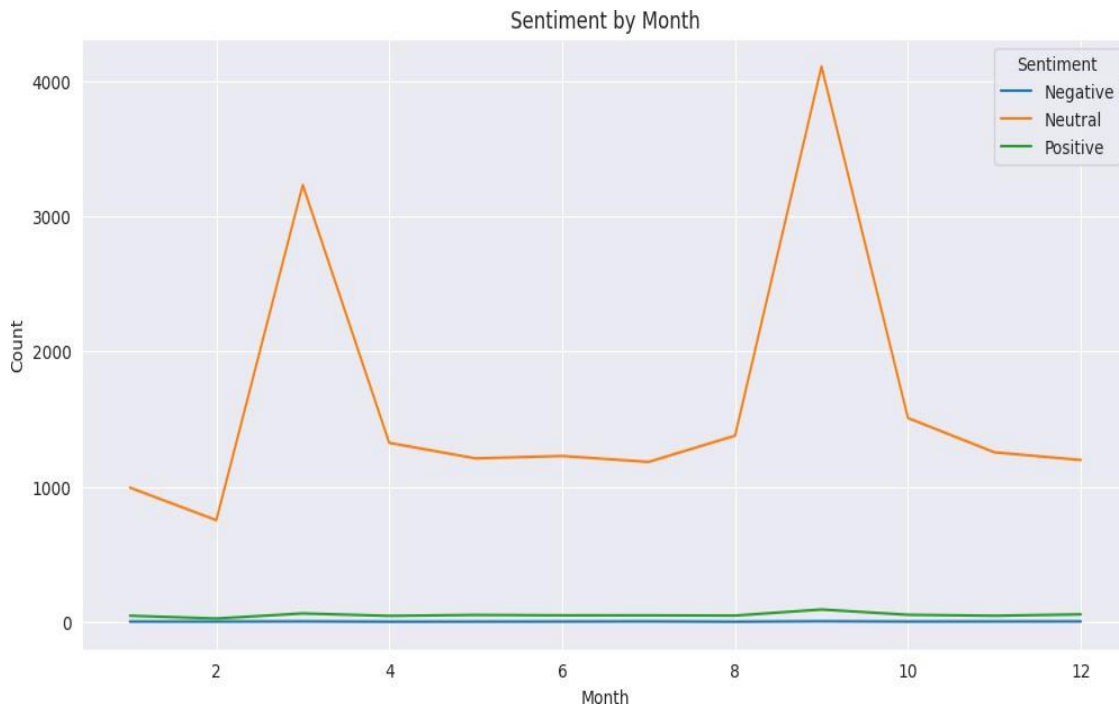
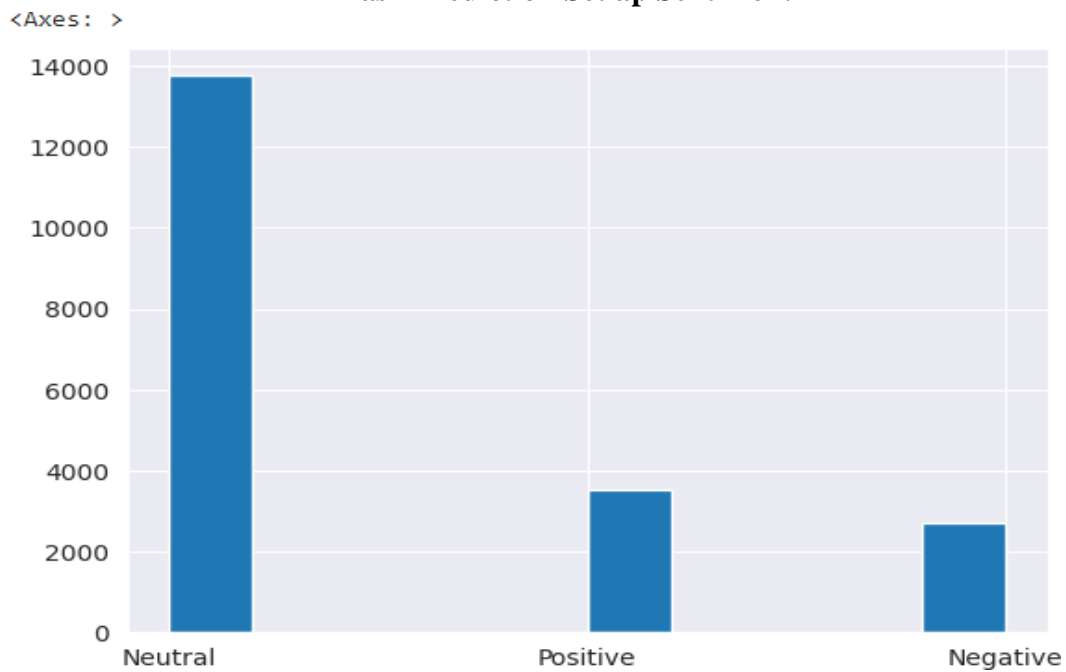


Lampiran

Analisis Sentiment Perbulan



Hasil Prediction Setiap Sentiment



Mencari Nilai Akurasi Terbaik Dengan 4 Perbandingan

Original Results:

	precision	recall	f1-score	support
Negative	0.00	0.00	0.00	4
Neutral	0.98	0.20	0.34	3873
Positive	0.04	0.89	0.07	123
accuracy			0.22	4000
macro avg	0.34	0.37	0.14	4000
weighted avg	0.95	0.22	0.33	4000

```
[[ 0 4 0]
 [299 783 2791]
 [ 0 13 110]]
```

Accuracy with original test data: 0.22325

Undersampling Results:

	precision	recall	f1-score	support
Negative	0.01	0.75	0.01	4
Neutral	0.99	0.74	0.85	3873
Positive	0.14	0.78	0.24	123
accuracy			0.75	4000
macro avg	0.38	0.76	0.37	4000
weighted avg	0.97	0.75	0.83	4000

Accuracy with undersampling test data: 0.746

Oversampling Results:

	precision	recall	f1-score	support
Negative	0.00	0.00	0.00	4
Neutral	0.98	0.20	0.34	3873
Positive	0.04	0.89	0.07	123
accuracy			0.22	4000
macro avg	0.34	0.37	0.13	4000
weighted avg	0.95	0.22	0.33	4000

Accuracy with oversampling test data: 0.224

Combined Oversampling and Undersampling Results:

	precision	recall	f1-score	support
Negative	0.01	0.75	0.01	4
Neutral	0.99	0.74	0.85	3873
Positive	0.14	0.78	0.24	123
accuracy			0.75	4000
macro avg	0.38	0.76	0.37	4000
weighted avg	0.97	0.75	0.83	4000

Accuracy with combined oversampling and undersampling test data: 0.746

Rata-rata Prediction Cross Validation Naïve Bayes Classifier dan score test dan latih

Rata-rata Prediction

Cross-validation scores: [0.76923077 0.76923077 0.69230769 0.66666667 0.852315000]

Confusion Matrix:

```
[[ 2  0  0]
 [246 1480 211]
 [ 6  4  51]]
```

Score Dari Test And Traing

Training set score: 0.7723

Test set score: 0.7665