## Project Update 1 Scores

**Table 1: Model Scores for Sarcasm Detection**

| **Model** | **Accuracy** | **Precision** | **Recall** | **F1 Score** | **Confusion Matrix** |
| --- | --- | --- | --- | --- | --- |
| Linear Regression (no n-gram) | 0.67 | 0.69 | 0.64 | 0.66 | TN: 107994, FP: 44117, FN: 55086, TP: 96035 |
| Naïve Bayes (no n-gram) | 0.65 | 0.64 | 0.68 | 0.66 | TN: 94459, FP: 57652, FN: 48604, TP: 102517 |
| Linear Regression (1,2 n-gram) | 0.68 | 0.69 | 0.67 | 0.68 | TN: 105796, FP: 45918, FN: 49937, TP: 101581 |
| Naïve Bayes (1,2 n-gram) | 0.66 | 0.65 | 0.70 | 0.68 | TN: 94895, FP: 56819, FN: 45176, TP: 106342 |

**Table 2: Model Performance Scores for Toxic Comment Detection**

| **Model** | **Accuracy** | **Precision** | **Recall** | **F1 Score** | **Confusion Matrix** |
| --- | --- | --- | --- | --- | --- |
| Linear Regression (C=0.1) | 0.93 | 0.61 | 0.82 | 0.70 | TN: 40439, FP: 2577, FN: 864, TP: 3992 |
| Linear Regression (C=1) | 0.94 | 0.68 | 0.83 | 0.75 | TN: 41015, FP: 1940, FN: 846, TP: 4071 |
| Linear Regression (C=2) | 0.95 | 0.72 | 0.81 | 0.76 | TN: 41342, FP: 1595, FN: 932, TP: 4003 |
| Linear Regression (C=5) | 0.95 | 0.75 | 0.80 | 0.77 | TN: 41675, FP: 1335, FN: 950, TP: 3912 |
| Naïve Bayes | 0.92 | 1.00 | 0.18 | 0.31 | TN: 43053, FP: 1, FN: 3930, TP: 888 |

**Table 3: Model Scores for Hate Speech Detection**

| **Model** | **Accuracy** | **Precision** | **Recall** | **F1 Score** | **Confusion Matrix** |
| --- | --- | --- | --- | --- | --- |
| Linear Regression | 0.91 | 0.34 | 0.62 | 0.44 | TN: 6533, FP: 489, FN: 156, TP: 257 |
| Naïve Bayes | 0.94 | 0.00 | 0.00 | 0.00 | TN: 0, FP: 0, FN: 429, TP: 7006 |