| Classification Report: |
|------------------------|
|------------------------|

| | precision | recall | f1-score | support |
|---------------|-----------|--------|----------|---------|
| Hate (0) | 0.34 | 0.65 | 0.44 | 52 |
| Offensive (1) | 0.99 | 0.97 | 0.98 | 2662 |
| accuracy | , | | 0.97 | 2714 |
| macro avg | 0.66 | 0.81 | 0.71 | 2714 |
| weighted avg | 0.98 | 0.97 | 0.97 | 2714 |

Figure 1. Classification Report — Hate vs Offensive

The report highlights the challenge of class imbalance. Offensive tweets achieve near-perfect precision (0.99), recall (0.97), and F1 (0.98). Hate tweets, however, exhibit low precision (0.34) and F1 score (0.44), indicating a high number of false positives and fewer correct identifications.

| neg | | | | neu | | | | \ |
|----------|--|-----------------------|---|--|--|---|---|---|
| mean | median | std | count | mean | median | std | count | |
| | | | | | | | | |
| 0.290893 | 0.281 | 0.231636 | 261 | 0.648471 | 0.637 | 0.230802 | 261 | |
| 0.266070 | 0.264 | 0.200650 | 13306 | 0.639633 | 0.631 | 0.207114 | 13306 | |
| 0.061550 | 0.000 | 0.112813 | 2753 | 0.830401 | 0.844 | 0.164431 | 2753 | |
| | | | | | | | | |
| pos | | | | compound | | | | |
| mean | median | std | count | mean | median | std | count | |
| | | | | | | | | |
| 0.060644 | 0.0 | 0.103726 | 261 | -0.409708 | -0.5719 | 0.453484 | 261 | |
| 0.094296 | 0.0 | 0.127670 | 13306 | -0.333923 | -0.5267 | 0.462047 | 13306 | |
| 0.108052 | 0.0 | 0.142384 | 2753 | 0.095741 | 0.0000 | 0.403498 | 2753 | |
| | mean 0.290893 0.266070 0.061550 pos mean 0.060644 0.094296 | mean median 0.290893 | mean median std 0.290893 0.281 0.231636 0.266070 0.264 0.200650 0.061550 0.000 0.112813 pos mean median std 0.060644 0.0 0.103726 0.094296 0.0 0.127670 | mean median std count 0.290893 0.281 0.231636 261 0.266070 0.264 0.200650 13306 0.061550 0.000 0.112813 2753 pos mean median std count 0.060644 0.0 0.103726 261 0.094296 0.0 0.127670 13306 | mean median std count mean 0.290893 0.281 0.231636 261 0.648471 0.266070 0.264 0.200650 13306 0.639633 0.061550 0.000 0.112813 2753 0.830401 pos mean median std count compound mean 0.060644 0.0 0.103726 261 -0.409708 0.094296 0.0 0.127670 13306 -0.333923 | mean median std count mean median 0.290893 0.281 0.231636 261 0.648471 0.637 0.266070 0.264 0.200650 13306 0.639633 0.631 0.061550 0.000 0.112813 2753 0.830401 0.844 pos mean median std count mean median median 0.060644 0.0 0.103726 261 -0.409708 -0.5719 0.094296 0.0 0.127670 13306 -0.3333923 -0.5267 | mean median std count mean median std 0.290893 0.281 0.231636 261 0.648471 0.637 0.230802 0.266070 0.264 0.200650 13306 0.639633 0.631 0.207114 0.061550 0.000 0.112813 2753 0.830401 0.844 0.164431 pos mean median std count mean median std 0.060644 0.0 0.103726 261 -0.409708 -0.5719 0.453484 0.094296 0.0 0.127670 13306 -0.3333923 -0.5267 0.462047 | mean median std count mean median std count 0.290893 0.281 0.231636 261 0.648471 0.637 0.230802 261 0.266070 0.264 0.200650 13306 0.639633 0.631 0.207114 13306 0.061550 0.000 0.112813 2753 0.830401 0.844 0.164431 2753 pos mean median std count mean median std count 0.060644 0.0 0.103726 261 -0.409708 -0.5719 0.453484 261 0.094296 0.0 0.127670 13306 -0.333923 -0.5267 0.462047 13306 |

Figure 2. Sentiment Statistics by Class

This table summarizes VADER sentiment scores. Hate (0) and Offensive (1) tweets have higher negative sentiment means (0.29 and 0.27) and strongly negative compound scores (-0.41, -0.33). In contrast, Neutral tweets (Class 2) skew strongly towards neutrality (mean 0.83) with a near-zero compound score.