**Agreement of sentiment analysis tools with the manual labeling and with each other**

|  |  |  |
| --- | --- | --- |
| **TOOLS** | **Original Kappa** | **Corrected Kappa** |
| NLTK​ ​ vs​ ​ Manual | 0.33 | 0.33 |
| SentiStrength​ ​ vs​ ​ Manual | 0.31 | 0.31 |
| Alchemy ​ ​ vs​ ​ Manual | 0.26 | 0.26 |
| SNLP vs Manual | 0.20 | 0.20 |
| NLTK​ ​ vs​ ​ SentiStrength | 0.22 | 0.22 |
| NLTK vs Alchemy | 0.20 | 0.30 |
| NLTK vs SNLP | 0.12 | 0.22 |
| SentiStrength vs Alchemy | 0.07 | 0.29 |
| SentiStrength vs SNLP | -0.14 | 0.18 |
| Alchemy vs SNLP | 0.25 | 0.23 |

**Agreement of groups of tools with the manual labeling (n = the number of comments the tools agree upon)**

|  |  |  |  |
| --- | --- | --- | --- |
| **TOOLS** | **n** | **Original Kappa** | **Corrected Kappa** |
| NLTK​, SentiStrength | 138 | 0.65 | 0.65 |
| NLTK, Alchemy | 134 | 0.46 | 0.48 |
| NLTK, SNLP | 122 | 0.43 | 0.44 |
| SentiStrength, Alchemy | 133 | 0.50 | 0.52 |
| SentiStrength, SNLP | 109 | 0.53 | 0.54 |
| Alchemy, SNLP | 130 | 0.36 | 0.36 |
| NLTK​, SentiStrength, Alchemy | 88 | 0.68 | 0.68 |
| NLTK​, SentiStrength, SNLP | 71 | 0.72 | 0.71 |
| SentiStrength, Alchemy, SNLP | 74 | 0.59 | 0.58 |
| NLTK, Alchemy, SNLP | 75 | 0.55 | 0.55 |
| NLTK, SentiStrength, Alchemy, SNLP | 53 | 0.72 | 0.72 |