

Appendix III

Table S2.1. Example user location strings that were used by the developed geolocation engine to infer US states for the Patient Experience tweets. The strings are divided into various groups to show the examples of variations in users' input.

| Task: Infer US State for <i>Patient Experience</i> tweets | | |
|--|-----------------------|-------------------------------------|
| Location Type | Example | Inferred State |
| Simple | Boston | Massachusetts |
| | Cali babyyyy! | California |
| Alternative names | The Windy City | Illinois (another name for Chicago) |
| | Lone Star State | Texas |
| Multiple places | Chicago/L.A | Illinois |
| | NYC/LONDON/LA | New York |
| Less Known | ICDC College | California |
| | The Land of Oz | North Carolina (a theme park) |
| Junk | Space with the Aliens | (Useless location string) |
| | Day Dreaming... | (Useless location string) |

Table S2.2. Examples of positive, negative, and neutral Patient Experience tweets.

| Task: Infer Patient Experience Sentiments | |
|--|--|
| Tweet Class | Examples |
| Positive | Thank God I went to urgent care yesterday |
| | Surgery went well, in some pain but they have drugs so im ok |
| Negative | nothing is helping. I'm out of pain medicine :(|
| | At hospital for about an hour with an emergency but still waiting for the doctor |
| Neutral | I want to go to the nurse to go home "sick" and go to the park |
| | I'm 19, why am I having surgery in a children's hospital? |