Supplementary Information for the paper 'Ensemble Algorithms for Microblog Summarization'

Soumi Dutta, Vibhash Chandra, Kanav Mehra Asit Kumar Das, Tanmoy Chakraborty, Saptarshi Ghosh

1 Base summarization algorithms

We provide some more details of the base extractive summarization algorithms that were considered in the paper.

1. Cluster-rank (CR): Cluster-rank [1] segments a given document (the transcript) into clusters and then constructs a cluster-graph of the transcripts. Then the well-known PageRank algorithm is used to compute an 'importance' score for each cluster. Also, a centroid-based approach is used to score each sentence within an important cluster. Finally, the algorithm starts from the highest scoring sentence and includes sentences in the summary until the desired length is obtained.

2. COWTS (CW): COWTS [2] is specifically designed for summarizing microblogs posted during disaster situations. The algorithm identifies 'content words' (nouns, verbs, numerals, etc.) from the microblogs, and then uses an Integer Linear Programming based approach to select microblogs such that the presence of these content words in the summary is maximized.

3. Frequency Summarizer (FS): This algorithm works on the simple idea that if a sentence contains the most recurrent words in the text, it is likely to cover most of the topics of the text. Based on this idea, the algorithm attempts to extract those sentences which cover the main topics of a given document.

4. LexRank (LR): LexRank [3] represents a given document as a graph based on intra-sentence cosine similarity. Then the importance of sentences in the document is computed based on the concept of eigenvector centrality in the graph. The sentences are then included in the summary in decreasing order of their importance.

5. LSA (LS): LSA [4] constructs a terms-by-sentences matrix A for a document, and performs Singular Value Decomposition on A to obtain the singular value matrix V^T , where each sentence is represented by the column vector. Then, it selects the k^{th} right singular vector from V^T . The sentence having the largest index value with the k^{th} right singular vector is included in the summary. This process is repeated until the desired summary length is obtained.

6. LUHN (LH): Luhn's algorithm [5] compiles a list of 'content words' (after stopword removal and stemming) sorted by decreasing frequency, the index providing a significance measure of the word. On a sentence level, a 'significance factor' is derived that reflects the number of occurrences of significant words within a sentence, and the linear distance between them due to the intervention of non-significant words. All sentences are ranked in order of their significance factor, and the top-ranked sentences are selected for the summary.

7. Mead (MD): Mead [6] first detects topics by agglomerative clustering over the TF-IDF vector representation of the documents. Then, it uses the centroids to identify sentences in each cluster that are central to the topic of the entire cluster. The final score of each sentence is a combination of three scores – its *centroid value*, *positional value*, and *first-sentence overlap* – minus a *redundancy penalty* for each sentence that overlaps highly ranked sentences. Sentences are finally selected based on this score.

8. SumBasic (SB): SumBasic [7] uses a frequency-based sentence selection component, with a component to re-weight the word probabilities in order to minimize redundancy. For each sentence, it assigns a weight

equal to the average probability of occurrence of the words in the sentence, and picks the best scoring sentence that contains the highest probability word. It then updates the probabilities. The above steps are repeated till the desired summary length is attained.

9. SumDSDR (SM): Document Summarization based on Data Reconstruction [8] is an unsupervised framework for summarization. The relationship between sentences is measured using two objective functions – (i) linear reconstruction, which approximates the document by linear combinations of selected sentences, and (ii) non-negative linear reconstruction, which allows only additive, not subtractive, linear combinations. The summary is generated by minimizing the reconstruction error.

We selected the algorithms stated above, because either their implementations are readily available off-theshelf, or they are relatively easy to implement. The availability of implementations are as follows - Frequency Summarizer (http://glowingpython.blogspot.in/2014/09/text-summarization-with-nltk.html), Mead (http://www.summarization.com/mead/), SumBasic (https://github.com/EthanMacdonald/SumBasic), SumDSDR (https://gist.github.com/satomacoto/4248449); LexRank, LSA and LUHN are available as part of the Python Sumy package (https://pypi.python.org/pypi/sumy). Implementation of COWTS was obtained from our prior work [2], while ClusterRank was implemented by us.

Note that apart from the ones described above, several other extractive summarization algorithms have also been developed, and they can also be utilised in our ensemble summarization frameworks.

2 Unsupervised ensemble summarization algorithm

Algorithm 1 describes our proposed graph-based ensemble summarization algorithm. For a given similarity function sim(), we consider its range $[sim_{min}, sim_{max}]$. We initialize the threshold $sim_{th} = sim_{max}$, and construct the graph G accordingly – as described in the main paper, each node in the graph is a tweet, and there is an edge between two nodes if the similarity between the two corresponding tweets is higher than sim_{th} . Then we identify groups (connected components or communities) of similar tweets, and select a representative tweet from each group of size larger than one, considering groups in decreasing order of their size. Larger groups are given preference, since a larger number of similar tweets implies that the common topic of those tweets is more important. Note that once a representative tweet from a group is selected, the other tweets in the group are removed, so as to prevent redundancy in the summary. In the next iteration, we reduce sim_{th} by a step sim_{dec} , and construct G again. This process is repeated until sim_{th} becomes equal to the lowest possible similarity value sim_{min} . At this stage, if K tweets have not yet been included in the summary, then the remaining tweets are ranked in decreasing order of their string lenth, and the requisite number of top (longest) tweets are selected.

3 Inter-annotator agreement over summaries

For evaluation of summarization algorithms, we followed the standard procedure of generating gold standard summaries by human annotators, and then comparing the algorithm-generated summaries with the gold standard ones. Three human annotators were asked to independently summarize each of the datasets, and prepare gold standard summaries for each dataset. It is a natural quest to observe how closely the gold standard summary written by one annotator resembles the summary written by another annotator. To this end, we consider the summary written by one particular annotator (for a given set of tweets) as the gold standard, and measure ROUGE scores for the summaries written by the other two annotators (for the same set of tweets).

The comparative ROUGE scores of the summaries written by the human annotators are reported in Table 1, averaged over the four datasets used in the paper. Here the summaries written by Annotator 1 are considered as gold standard, and ROUGE scores of the summaries written by Annotator 2 and Annotator 3 are computed. It is clear that the summaries written by Annotator 3 are more similar to the summaries written by Annotator 1 (higher ROUGE scores), as compared to the summaries written by Annotator 2. Importantly, the ROUGE similarity between summaries written by two human annotators is in the same range as the ROUGE similarities between the summaries generated by the algorithms considered in the paper and the gold standard summaries. This observation implies that the variation in the summaries generated

Input: S: Set of distinct tweets selected by base algorithms,
K: Desired length of the summary,
sim(): Method to measure similarity between two tweets,
sim_{max} : Maximum similarity,
sim_{min} : Minimum similarity,
sim_{dec} : Steps in the range $[sim_{min}, sim_{max}]$,
Gnodes(): Method to identify groups of similar nodes in a graph,
<i>Tselect()</i> : Method to select a tweet from a group of similar tweets
Output: A summary of tweets of length K
1 $sim_{th} = sim_{max}$ > Initial threshold similarity
2 while length of summary $\langle K \ \mathcal{C} \ sim_{th} \rangle sim_{min} \ \mathbf{do}$
3 Construct similarity graph G, where nodes are tweets in S, and nodes t_i and t_j are connected by an edge
$\inf sim(t_i,t_j) \ge sim_{th}$
4 Identify groups of similar nodes using method <i>Gnodes()</i>
5 Rank groups in decreasing order of their size
6 for each group g_i with size > 1 (considered in decreasing order of group size) do
7 if length of summary $< K$ then
8 Select a representative node (tweet) t from g_i by method $Tselect()$
9 Add t to the summary
10 Remove all nodes in g_i from G
11 $sim_{th} = sim_{th} - sim_{dec}$ \triangleright Reduce the threshold similarity
\triangleright No more similar tweets and desired length is unreached
13 if length of summary $< K$ then
14 Rank remaining tweets in G in decreasing order of length
15 Include requisite number of top-ranked tweets to make the summary of length K
16 return Summary of length K tweets;

Algorithm 1: EnGraphSumm : the proposed graph-based ensemble summarization algorithm.

by the algorithms with respect to a human generated gold standard is of a similar range as the variation in the summaries generated by two different annotators. As such, this observation brings out the subjectivity in the summarization process.

Considering that summarization is a subjective process, for evaluation of the algorithms, we computed ROUGE scores (as reported in the paper) considering all the three annotator-generated summaries as gold standards.

Table 1: Comparative ROUGE scores of summaries written by the different human annotators. The summaries written by Human Annotator 1 are considered the gold standard, and the ROUGE scores of the summaries written by Annotator 2 and Annotator 3 are computed. Reported values are the averages over all four datasets.

Human Annotators	Rouge-2 Recall	Rouge-L Recall
Human Annotator 2	0.16438	0.38233
Human Annotator 3	0.22082	0.47076

4 Demonstrating the input and output of summarization algorithms through an example

Several summarization algorithms have been used in the paper, including base off-the-shelf summarization algorithms as well as ensemble ones. We demonstrate the input and output of these summarization algorithms through a small example. We consider a sample dataset of 50 tweets, randomly selected from the dataset of tweets related to the Sandy Hook elementary school shooting incident (as described in the paper). Table 2 shows the small dataset of 50 tweets.

Table 2: Sample dataset of 50 tweets related to the Sandy Hook school shooting incident (randomly selected subset of one of the datasets used in the paper).

RT @derrickAaron:An elementary school shooting is one of the saddest things I've ever heard.People are going to do a lot of crazy shit this week. First the shooting in Oregon and now a shooting a school in Connecticut.RT @amanda_frankel:There was a shooting at an elementary school. I'm loosing all faith in humanity #Breaking: CBS News,confirms 27 dead 14 are children in #Newtown CT school #shooting.http://t.co/el live http://t.co/MF3LU26R.BREAKING: More on elementary school shooting: Apparent shooter is an adult 2 handguns recovered @nbcnightlynews.school in two weeks omg can someone pls shoot me im not ready yet omfg i wanna cry.AP now reporting 27 dead, including 18 children at Connecticut school shooting. One gunman dead on ABC.ABC.State Police helicopter circling low in Newtown #schoolshooting http://t.co/wVxy8sBn.what kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school in Connec gun culture has to .RT @FoxNews:Multiple deaths reported in shooting at Connecticut elementary school, http://t.co/res HookElementarySchool.RT @GayanMW: Let's,take a moment to pay tribute to the innocent souls that were lost in the Connect school shooting.RT @GrankKnuckles:LORD HAVE MERCY: Pray 4 the families of this Connecticut elementary school RT @CP24: A gunman was killed in the shooting at an elementary school in Newtown, Conn. local,office	per state official e still loose says lia coverage, it'll e sicken me. ticut. America's wQing #Sandy- ticut elementary shooting.
RT @derrickAaron:An elementary school shooting is one of the saddest things I've ever heard.People are going to do a lot of crazy shit this week. First the shooting in Oregon and now a shooting a school in Connecticut.RT @amanda.frankel:There was a shooting at an elementary school. I'm loosing all faith in humanity#Breaking: CBS News,confirms 27 dead 14 are children in #Newtown CT school #shooting.http://t.co/MF3LU26R.BREAKING: More on elementary school shooting: Apparent shooter is an adult 2 handguns recovered@nbcnightlynews.school in two weeks omg can someone pls shoot me im not ready yet omfg i wanna cry.AP now reporting 27 dead, including 18 children at Connecticut school shooting. One gunman dead on ABC.A shooting this morning at an elementary school in Connecticut. If we keep glorifying this shit w/ med continue to happen.State Police helicopter circling low in Newtown #schoolshooting http://t.co/wVxy8sBn.what kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school in Connecticut school shooting.RT @piersmorgan: Another day another horrific shooting - this time at an elementary school in Connecticut elementary school, http://t.co/resHookElementarySchool.RT @GayanMW: Let's,take a moment to pay tribute to the innocent souls that were lost in the Connect school shooting.RT @GrankKnuckles:LORD HAVE MERCY: Pray 4 the families of this Connecticut elementary school	per state official e still loose says lia coverage, it'll e sicken me. ticut. America's wQing #Sandy- ticut elementary shooting.
RT @derrickAaron:An elementary school shooting is one of the saddest things I've ever heard.People are going to do a lot of crazy shit this week. First the shooting in Oregon and now a shooting a school in Connecticut.RT @amanda.frankel:There was a shooting at an elementary school. I'm loosing all faith in humanity #Breaking: CBS News,confirms 27 dead 14 are children in #Newtown CT school #shooting.http://t.co/cl live http://t.co/MF3LU26R.BREAKING: More on elementary school shooting: Apparent shooter is an adult 2 handguns recovered @nbcnightlynews.school in two weeks omg can someone pls shoot me im not ready yet omfg i wanna cry.AP now reporting 27 dead, including 18 children at Connecticut school shooting. One gunman dead on ABC.Ashooting this morning at an elementary school in Connecticut. If we keep glorifying this shit w/ med continue to happen.State Police helicopter circling low in Newtown #schoolshooting http://t.co/wVxy8sBn.what kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school?? people RT @piersmorgan: Another day another horrific shooting - this time at an elementary school in Connec gun culture has to .RT @GayanMW: Let's,take a moment to pay tribute to the innocent souls that were lost in the Connec school shooting.	per state official ne still loose says lia coverage, it'll e sicken me. ticut. America's wQing #Sandy- ticut elementary
 RT @derrickAaron:An elementary school shooting is one of the saddest things I've ever heard. People are going to do a lot of crazy shit this week. First the shooting in Oregon and now a shooting a school in Connecticut. RT @amanda_frankel:There was a shooting at an elementary school. I'm loosing all faith in humanity #Breaking: CBS News,confirms 27 dead 14 are children in #Newtown CT school #shooting.http://t.co/elive http://t.co/MF3LU26R. BREAKING: More on elementary school shooting: Apparent shooter is an adult 2 handguns recovered @nbcnightlynews. school in two weeks omg can someone pls shoot me im not ready yet omfg i wanna cry. AP now reporting 27 dead, including 18 children at Connecticut school shooting. One gunman dead on ABC. A shooting this morning at an elementary school in Connecticut. If we keep glorifying this shit w/ med continue to happen. State Police helicopter circling low in Newtown #schoolshooting http://t.co/wVxy8sBn. what kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school in Connec gun culture has to . RT @piersmorgan: Another day another horrific shooting - this time at an elementary school in Connec gun culture has to . RT @FoxNews:Multiple deaths reported in shooting at Connecticut elementary school, http://t.co/res HookElementarySchool. RT @GayanMW: Let's,take a moment to pay tribute to the innocent souls that were lost in the Connection of the sould be added to the innocent souls that were lost in the Connection of the innocent souls that were lost in the Connection of the innocent souls that were lost in the Connection of the innocent souls that were lost in the Connection of the innocent souls that were lost in the Connection of the innocent souls that were lost in the Connection of the innocent souls that were lost in the Connection of the innocent souls that were lost in the Connection of the innocent souls that were lost in th	per state official ne still loose says lia coverage, it'll e sicken me. tticut. America's wQing #Sandy-
 RT @derrickAaron:An elementary school shooting is one of the saddest things I've ever heard. People are going to do a lot of crazy shit this week. First the shooting in Oregon and now a shooting a school in Connecticut. RT @amanda_frankel:There was a shooting at an elementary school. I'm loosing all faith in humanity #Breaking: CBS News,confirms 27 dead 14 are children in #Newtown CT school #shooting.http://t.co/elive http://t.co/MF3LU26R. BREAKING: More on elementary school shooting: Apparent shooter is an adult 2 handguns recovered @nbcnightlynews. school in two weeks omg can someone pls shoot me im not ready yet omfg i wanna cry. AP now reporting 27 dead, including 18 children at Connecticut school shooting. One gunman dead on ABC. A shooting this morning at an elementary school in Connecticut. If we keep glorifying this shit w/ med continue to happen. State Police helicopter circling low in Newtown #schoolshooting http://t.co/wVxy8sBn. what kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school?? people RT @piersmorgan: Another day another horrific shooting - this time at an elementary school in Connecticut elementary school. 	per state official ne still loose says lia coverage, it'll e sicken me. tticut. America's wQing #Sandy-
 RT @derrickAaron:An elementary school shooting is one of the saddest things I've ever heard. People are going to do a lot of crazy shit this week. First the shooting in Oregon and now a shooting a school in Connecticut. RT @amanda_frankel:There was a shooting at an elementary school. I'm loosing all faith in humanity #Breaking: CBS News,confirms 27 dead 14 are children in #Newtown CT school #shooting.http://t.co/elive http://t.co/MF3LU26R. BREAKING: More on elementary school shooting: Apparent shooter is an adult 2 handguns recovered @nbcnightlynews. school in two weeks omg can someone pls shoot me im not ready yet omfg i wanna cry. AP now reporting 27 dead, including 18 children at Connecticut school shooting. One gunman dead on ABC. A shooting this morning at an elementary school in Connecticut. If we keep glorifying this shit w/ med continue to happen. State Police helicopter circling low in Newtown #schoolshooting http://t.co/wVxy8sBn. what kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school?? people RT @piersmorgan: Another day another horrific shooting - this time at an elementary school in Connecticut elementary school, http://t.co/res 	per state official ne still loose says lia coverage, it'll e sicken me. tticut. America's
 RT @derrickAaron:An elementary school shooting is one of the saddest things I've ever heard. People are going to do a lot of crazy shit this week. First the shooting in Oregon and now a shooting a school in Connecticut. RT @amanda_frankel:There was a shooting at an elementary school. I'm loosing all faith in humanity #Breaking: CBS News,confirms 27 dead 14 are children in #Newtown CT school #shooting.http://t.co/elive http://t.co/MF3LU26R. BREAKING: More on elementary school shooting: Apparent shooter is an adult 2 handguns recovered @nbcnightlynews. school in two weeks omg can someone pls shoot me im not ready yet omfg i wanna cry. AP now reporting 27 dead, including 18 children at Connecticut school shooting. One gunman dead on ABC. A shooting this morning at an elementary school in Connecticut. If we keep glorifying this shit w/ med continue to happen. State Police helicopter circling low in Newtown #schoolshooting http://t.co/wVxy8sBn. what kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school?? people RT @piersmorgan: Another day another horrific shooting - this time at an elementary school in Connec gun culture has to . 	per state official ne still loose says lia coverage, it'll e sicken me. tticut. America's
RT @derrickAaron:An elementary school shooting is one of the saddest things I've ever heard. People are going to do a lot of crazy shit this week. First the shooting in Oregon and now a shooting a school in Connecticut. RT @amanda_frankel:There was a shooting at an elementary school. I'm loosing all faith in humanity #Breaking: CBS News,confirms 27 dead 14 are children in #Newtown CT school #shooting.http://t.co/el live http://t.co/MF3LU26R. BREAKING: More on elementary school shooting: Apparent shooter is an adult 2 handguns recovered @nbcnightlynews. school in two weeks omg can someone pls shoot me im not ready yet omfg i wanna cry. AP now reporting 27 dead, including 18 children at Connecticut school shooting. One gunman dead on ABC. A shooting this morning at an elementary school in Connecticut. If we keep glorifying this shit w/ med continue to happen. State Police helicopter circling low in Newtown #schoolshooting http://t.co/wVxy8sBn. what kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school?? people RT @piersmorgan: Another day another horrific shooting - this time at an elementary school in Connect	per state official ne still loose says lia coverage, it'll e sicken me.
RT @derrickAaron:An elementary school shooting is one of the saddest things I've ever heard. People are going to do a lot of crazy shit this week. First the shooting in Oregon and now a shooting a school in Connecticut. RT @amanda_frankel:There was a shooting at an elementary school. I'm loosing all faith in humanity #Breaking: CBS News,confirms 27 dead 14 are children in #Newtown CT school #shooting.http://t.co/el live http://t.co/MF3LU26R. BREAKING: More on elementary school shooting: Apparent shooter is an adult 2 handguns recovered @nbcnightlynews. school in two weeks omg can someone pls shoot me im not ready yet omfg i wanna cry. AP now reporting 27 dead, including 18 children at Connecticut school shooting. One gunman dead on ABC. A shooting this morning at an elementary school in Connecticut. If we keep glorifying this shit w/ med continue to happen. State Police helicopter circling low in Newtown #schoolshooting http://t.co/wVxy8sBn. what kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school?? people	per state official ne still loose says lia coverage, it'll e sicken me.
RT @derrickAaron:An elementary school shooting is one of the saddest things I've ever heard. People are going to do a lot of crazy shit this week. First the shooting in Oregon and now a shooting a school in Connecticut. RT @amanda_frankel:There was a shooting at an elementary school. I'm loosing all faith in humanity #Breaking: CBS News,confirms 27 dead 14 are children in #Newtown CT school #shooting.http://t.co/elive http://t.co/MF3LU26R. BREAKING: More on elementary school shooting: Apparent shooter is an adult 2 handguns recovered @nbcnightlynews. school in two weeks omg can someone pls shoot me im not ready yet omfg i wanna cry. AP now reporting 27 dead, including 18 children at Connecticut school shooting. One gunman dead on ABC. A shooting this morning at an elementary school in Connecticut. If we keep glorifying this shit w/ med continue to happen. State Police helicopter circling low in Newtown #schoolshooting http://t.co/wVxy8sBn.	per state official ne still loose says lia coverage, it'll
RT @derrickAaron:An elementary school shooting is one of the saddest things I've ever heard. People are going to do a lot of crazy shit this week. First the shooting in Oregon and now a shooting a school in Connecticut. RT @amanda_frankel:There was a shooting at an elementary school. I'm loosing all faith in humanity #Breaking: CBS News,confirms 27 dead 14 are children in #Newtown CT school #shooting.http://t.co/elive http://t.co/MF3LU26R. BREAKING: More on elementary school shooting: Apparent shooter is an adult 2 handguns recovered @nbcnightlynews. school in two weeks omg can someone pls shoot me im not ready yet omfg i wanna cry. AP now reporting 27 dead, including 18 children at Connecticut school shooting. One gunman dead on ABC. A shooting this morning at an elementary school in Connecticut. If we keep glorifying this shit w/ med continue to happen.	per state official ne still loose says
 RT @derrickAaron:An elementary school shooting is one of the saddest things I've ever heard. People are going to do a lot of crazy shit this week. First the shooting in Oregon and now a shooting a school in Connecticut. RT @amanda_frankel:There was a shooting at an elementary school. I'm loosing all faith in humanity #Breaking: CBS News,confirms 27 dead 14 are children in #Newtown CT school #shooting.http://t.co/elive http://t.co/MF3LU26R. BREAKING: More on elementary school shooting: Apparent shooter is an adult 2 handguns recovered @nbcnightlynews. school in two weeks omg can someone pls shoot me im not ready yet omfg i wanna cry. AP now reporting 27 dead, including 18 children at Connecticut school shooting. One gunman dead on ABC. A shooting this morning at an elementary school in Connecticut. If we keep glorifying this shit w/ med 	per state official ne still loose says
RT @derrickAaron:An elementary school shooting is one of the saddest things I've ever heard. People are going to do a lot of crazy shit this week. First the shooting in Oregon and now a shooting a school in Connecticut. RT @amanda_frankel:There was a shooting at an elementary school. I'm loosing all faith in humanity #Breaking: CBS News,confirms 27 dead 14 are children in #Newtown CT school #shooting.http://t.co/elive http://t.co/MF3LU26R. BREAKING: More on elementary school shooting: Apparent shooter is an adult 2 handguns recovered @nbcnightlynews. school in two weeks omg can someone pls shoot me im not ready yet omfg i wanna cry. AP now reporting 27 dead, including 18 children at Connecticut school shooting. One gunman dead on ABC.	per state official ne still loose says
RT @derrickAaron:An elementary school shooting is one of the saddest things I've ever heard. People are going to do a lot of crazy shit this week. First the shooting in Oregon and now a shooting a school in Connecticut. RT @amanda_frankel:There was a shooting at an elementary school. I'm loosing all faith in humanity #Breaking: CBS News,confirms 27 dead 14 are children in #Newtown CT school #shooting.http://t.co/e live http://t.co/MF3LU26R. BREAKING: More on elementary school shooting: Apparent shooter is an adult 2 handguns recovered @nbcnightlynews. school in two weeks omg can someone pls shoot me im not ready yet omfg i wanna cry. AP now reporting 27 dead, including 18 children at Connecticut school shooting. One gunman dead on	per state official
RT @derrickAaron:An elementary school shooting is one of the saddest things I've ever heard. People are going to do a lot of crazy shit this week. First the shooting in Oregon and now a shooting a school in Connecticut. RT @amanda_frankel:There was a shooting at an elementary school. I'm loosing all faith in humanity #Breaking: CBS News,confirms 27 dead 14 are children in #Newtown CT school #shooting.http://t.co/elive http://t.co/MF3LU26R. BREAKING: More on elementary school shooting: Apparent shooter is an adult 2 handguns recovered @nbcnightlynews. school in two weeks omg can someone pls shoot me im not ready yet omfg i wanna cry.	per state official
 RT @derrickAaron:An elementary school shooting is one of the saddest things I've ever heard. People are going to do a lot of crazy shit this week. First the shooting in Oregon and now a shooting a school in Connecticut. RT @amanda_frankel:There was a shooting at an elementary school. I'm loosing all faith in humanity #Breaking: CBS News,confirms 27 dead 14 are children in #Newtown CT school #shooting.http://t.co/elive http://t.co/MF3LU26R. BREAKING: More on elementary school shooting: Apparent shooter is an adult 2 handguns recovered @nbcnightlynews. 	•
 RT @derrickAaron:An elementary school shooting is one of the saddest things I've ever heard. People are going to do a lot of crazy shit this week. First the shooting in Oregon and now a shooting a school in Connecticut. RT @amanda_frankel:There was a shooting at an elementary school. I'm loosing all faith in humanity #Breaking: CBS News,confirms 27 dead 14 are children in #Newtown CT school #shooting.http://t.co/elive http://t.co/MF3LU26R. BREAKING: More on elementary school shooting: Apparent shooter is an adult 2 handguns recovered 	•
RT @derrickAaron:An elementary school shooting is one of the saddest things I've ever heard. People are going to do a lot of crazy shit this week. First the shooting in Oregon and now a shooting a school in Connecticut. RT @amanda_frankel:There was a shooting at an elementary school. I'm loosing all faith in humanity #Breaking: CBS News,confirms 27 dead 14 are children in #Newtown CT school #shooting.http://t.co/elive http://t.co/MF3LU26R.	•
RT @derrickAaron:An elementary school shooting is one of the saddest things I've ever heard. People are going to do a lot of crazy shit this week. First the shooting in Oregon and now a shooting a school in Connecticut. RT @amanda.frankel:There was a shooting at an elementary school. I'm loosing all faith in humanity #Breaking: CBS News,confirms 27 dead 14 are children in #Newtown CT school #shooting.http://t.co/e	ejk8hBDF Listen
RT @derrickAaron:An elementary school shooting is one of the saddest things I've ever heard. People are going to do a lot of crazy shit this week. First the shooting in Oregon and now a shooting a school in Connecticut. RT @amanda_frankel:There was a shooting at an elementary school. I'm loosing all faith in humanity	eik8hBDF Listen
RT @derrickAaron:An elementary school shooting is one of the saddest things I've ever heard. People are going to do a lot of crazy shit this week. First the shooting in Oregon and now a shooting a school in Connecticut.	
RT @derrickAaron:An elementary school shooting is one of the saddest things I've ever heard. People are going to do a lot of crazy shit this week. First the shooting in Oregon and now a shooting a	
RT @derrickAaron:An elementary school shooting is one of the saddest things I've ever heard.	un cicinciitur y
	at an elementary
Chi	
at	es as mane sense
RT @JaCharLove_Xo: Wtf is wrong wit people!? Shooting up an elementary school tho? Like were doe	es at make sense
Such a tragedy.	, ,, _,, _
RT @Autumn_Rose8: My heart goes out to the people of Newtown and all those involved in the $\#$ Sandy	
A shooting in an elementary school? Really? There are truly some awful people in this world #senseles	s #justchildren
Wow! I'm so,disgusted. Multiple people dead including children in a CT school shooting.Smh! RIP!!!.	
Horrified as I, watch the CT school shooting unfold. Is it time to talk about gun control, yet? #utpol.	
http://t.co/WxCBIRPI.	
Newtown, Conn.you're all in my prayers today! Esp. all the children @ Sandy Hook school,Such a tragic	and scarv event!
cut>http://t.co/s5R5ivEC WHY?.	3
@WNEMTV5news:BREAKING: CBS News is reporting up to 27 are dead in an elementary school shoot	ting in Connecti-
shooters would have .	
RT @piersmorgan:Any moment now, a gun nut will tweet me saying 'If all the kids in that, school had '	been armed, the
#noexcuses.	
For the previous, school shooters that are still alive in prison - you don't deserve to see, another day	/ #notolerance
ing.http://t.co/ejk8hBDF Listen .	,
RT,@1010WINSNewYork: #Breaking: CBS News confirms 27 dead, 14 are children in,#Newtown, CT	school #shoot-
being reported http://t.c.	
RT @BuzzFeed: Photo, from the Newtown Bee of students evacuating elementary school where a, poss	sible shooting is
RT@samaiahernandez: The scene walking towards school. #schoolshooting,http://t.co/OD9EM3oa.	
with this, tragedy.	
School, http://t.co/wsojtonil. Shooting at a Connecticut elementary school.Luckily, my son attends a different one.,Our hearts go ou	it to all involved
school, http://t.co/w80jtOhL.	ucut,elementary
Counselors shid b,avail 2 ALL ct school age kids Shooter reported dead at Connec	tiout along antons
Oh shit shooting in, a school in CT, hope girls steph and paul are fine.	
RT @tommytomlinson:CBS reporting 27 dead in CT school shooting. I'm gonna pass on debating guns, right now. Go hug yo.	or anything else

Continued from previous page
RT @KatyBaby02: Wtf a shooting in newtown elementary school 10 kids shot what has this world come to.
My Thoughts and, prayers are with the victims of the shooting at the elementary school. So sad. #Pray.
Another school shooting. People will say it's "unacceptable." A lie, of course when you consider nothing will be done
about it.
RT @RHHIBent:"@slicKGilchrist:School shooting reported in Conn. this morning. SMH! http://t.co/ghEOEx50" This
has got to stop. Pray fo.
Another school shooting. Elementary school.Ugh .Another reason for Americans to feel like the country is coming apart.
I'm really over, this violence. It HAS got to stop. My thoughts & prayers go out right, now living through this fatal school
shooting.
RT @AP: MORE: State, police respond to report of school shooting in Newtown, Conn.; lockdown in, place:
http://t.co/NMcOYixP -BW.
BRUH RT,@eyewitnessnyc: Official confirms multiple fatalities in Newtown school shooting http://t.co/moc85BdS
@breakingnews.
RT @kylebrennan1:Woah! Live interview with a parent in #Newtown just said the Sandy Hook Elementary School
principal was shot and killed.
RT @CBS6: BREAKING: The principal and a school psychologist were killed in elementary school shooting
http://t.co/tpfRXdZ2 #CT.
RT @eyewitnessnyc:LIVE: Continuing coverage of Sandy Hook Elementary School shooting in Connecticut
http://t.co/EKNr1Xw4.
My heart goes out to all the kids, families and workers involved in the, elementary school shooting in Connecticut, this
morning.
Who the hell goes to an elementary school and shoots kids? 27 dead already, what a shame.#prayers.
My prayers go out to all of the families affected in the Connecticut elementary school shooting.
Wtf a shooting in newtown elementary school 10 kids shot what has this world come to.
Who the hell shoots up an elementary school #sick.
My prayers go out to everyone affected by the school shooting in Connecticut.
Connecticut, elementary school evacuated after reported shooting http://t.co/yTLvl2fT.
My prayers and, condolences to all affected by the school shooting in CT. Hug your kids every, chance you get. Man is
totally depraved.

We applied the base summarization algorithms on this small dataset of 50 tweets shown in Table 2, to obtain summaries of 20 tweets by each algorithm. The summaries produced by the base algorithms are shown in the following tables:

ClusterRank: Table 3 COWTS: Table 4 Frequency Summarizer: Table 5 LexRank: Table 6 LSA: Table 7 LUHN: Table 8 Mead: Table 9 SumBasic: Table 10 SumDSDR: Table 11.

We also applied some of the proposed ensemble algorithms on the small dataset of 50 tweets, to obtain summaries of 20 tweets each. Specifically, we chose to demonstrate the outputs of some of the ensemble algorithms that achieved higher ROUGE scores than the best base algorithm, in the evaluation carried out in the paper The summaries produced by the proposed ensemble algorithms are shown in the following tables: VecSim-ConComp-maxSumTFIDF algorithm: Table 12 VecSim-ConComp-maxLen algorithm: Table 13

VecSim-Community-maxSumTFIDF algorithm: Table 14

References

 N. Garg, B. Favre, K. Riedhammer, and D. Hakkani-Tr, "Clusterrank: a graph based method for meeting summarization." in *INTERSPEECH*. ISCA, 2009, pp. 1499–1502.

Table 3: Summary generated by Cluster-rank (CR) algorithm

People are going to do a lot of crazy shit this week. First the shooting in Oregon and now a shooting at an elementary
school in Connecticut.
My prayers go out to all of the families affected in the Connecticut elementary school shooting.
My heart goes out to all the kids, families and workers involved in the, elementary school shooting in Connecticut this
morning.
RT @CBS6: BREAKING: The principal and a school psychologist were killed in elementary school shooting
http://t.co/tpfRXdZ2 #CT.
RT @CP24: A gunman was killed in the shooting at an elementary school in Newtown, Conn., local official tells AP.
"@WNEMTV5news: BREAKING: CBS News is reporting up to 27 are dead in an elementary school shooting in Con-
necticut>http://t.co/s5R5ivEC" WHY?.
RT @KatyBaby02: Wtf a shooting in newtown elementary school 10 kids shot what has this world come to.
RT @piersmorgan: Another day, another horrific shooting - this time at an elementary school in Connecticut. America's
gun culture has to .
My prayers go out to everyone affected by the school shooting in Connecticut.
RT @amanda_frankel: There was a shooting at an elementary school. I'm loosing all faith in humanity.
RT @GayanMW: Let's take a moment to pay tribute to the innocent souls that were lost in the Connecticut elementary
school shooting.
RT @FoxNews: Multiple deaths reported in shooting at Connecticut elementary school http://t.co/reswQing #Sandy-
HookElementarySchool.
Wtf a shooting in newtown elementary school 10 kids shot what has this world come to.
RT @FrankKnuckles: LORD HAVE MERCY: Pray 4 the families of this Connecticut elementary school shooting.
RT @AP: MORE: State police respond to report of school shooting in Newtown, Conn.; lockdown in place:
http://t.co/NMcOYixP -BW.
A shooting in an elementary school? Really?, There are truly some awful people in this world #senseless #justchildren.
Connecticut elementary school evacuated after reported shooting http://t.co/yTLvl2fT.
Oh shit shooting in a school in CT, hope girls steph and paul are fine.
RT @BuzzFeed: Photo from the Newtown Bee of students evacuating elementary school where a possible shooting is
being reported http://t.c .
RT @1010WINSNewYork: #Breaking: CBS News confirms 27 dead, 14 are children in #Newtown, CT school #shoot-
ing.http://t.co/ejk8hBDF Listen .

- [2] K. Rudra, S. Ghosh, P. Goyal, N. Ganguly, and S. Ghosh, "Extracting situational information from microblogs during disaster events: A classification-summarization approach," in *Proc. ACM CIKM*, 2015.
- [3] G. Erkan and D. R. Radev, "Lexrank: Graph-based lexical centrality as salience in text summarization," J. Artif. Int. Res., vol. 22, no. 1, pp. 457–479, 2004.
- [4] Y. Gong and X. Liu, "Generic text summarization using relevance measure and latent semantic analysis," in SIGIR, 2001, pp. 19–25.
- [5] H. P. Luhn, "The automatic creation of literature abstracts," IBM J. Res. Dev., vol. 2, no. 2, pp. 159–165, Apr. 1958.
- [6] D. R. Radev, E. Hovy, and K. McKeown, "Introduction to the special issue on summarization," Comput. Linguist., vol. 28, no. 4, pp. 399–408, 2002.
- [7] A. Nenkova and L. Vanderwende, "The impact of frequency on summarization," Microsoft Research, Tech. Rep., 2005.
- [8] Z. He, C. Chen, J. Bu, C. Wang, L. Zhang, D. Cai, and X. He, "Document summarization based on data reconstruction," in Proc. AAAI Conference on Artificial Intelligence, 2012, pp. 620–626.

Table 4: Summary generated by COWTS (CW) Algorithm

 My prayers go out to everyone affected by the school shooting in Connecticut. #Breaking: CBS News confirms 27 dead, 14 are children in #Newtown, CT school #shooting.http://t.co/NF3LU26R. Tm really over this violence. It HAS got to stop. My thoughts & prayers go out right now living through this fatal school shooting. People are going to do a lot of crazy shit this week. First the shooting in Oregon and now a shooting at an elementary school in Connecticut. My Thoughts and prayers are with the victims of the shooting at the elementary school. So sad. #Pray. BREAKING: More on elementary school shooting: Apparent shooter is an adult, 2 handguns recovered per state official @nhcnightlynews. BRUH RT @eyewitnessnyc: Official confirms multiple fatalities in Newtown school shooting http://t.co/moc85BdS @breakingnews. A shooting this morning at an elementary school in Connecticut. If we keep glorifying this shit w/ media coverage, it'll continue to happen. RT @GagandW: Let's take a moment to pay tribute to the innocent souls that were lost in the Connecticut elementary school shooting. Newtown, Conn. you're all in my prayers today! Esp. all the children @ Sandy Hook school Such a tragic and scary event! http://t.co/MxCBIRPI. RT @AP: MORE: State police respond to report of school shooting in Newtown, Conn.; lockdown in place: http://t.co/NMcOYixP -BW. State Police helicopter circling low in Newtown #schoolshooting http://t.co/wXy8sBn. RT @JaCharLove.Xo: Wtf is wrong wit people!? Shooting up an elementary school the? Like were does at make sense at. Another school shooting. Elementary school.,Ugh . Another reason for Americans to feel like the country is coming apart. Horified as I watch the CT school shooting unfold. Is it time to talk about gun control yet? #utpol. RT @JaCharLove.Xo: Wtf is wrong wit people!? Shooting up an elementary school?? people sicken me. <li< th=""><th></th></li<>	
Listen live http://t.co/MF3LU26R. I'm really over this violence. It HAS got to stop. My thoughts & prayers go out right now living through this fatal school shooting. People are going to do a lot of crazy shit this week. First the shooting in Oregon and now a shooting at an elementary school in Connecticut. My Thoughts and prayers are with the victims of the shooting at the elementary school. So sad. #Pray. BREAKING: More on elementary school shooting: Apparent shooter is an adult, 2 handguns recovered per state official @nbcnightlynews. BREUH RT @eyewitnessnyc: Official confirms multiple fatalities in Newtown school shooting http://t.co/moc85BdS @breakingnews. A shooting this morning at an elementary school in Connecticut. If we keep glorifying this shit w/ media coverage, it'll continue to happen. RT @GayanMW: Let's take a moment to pay tribute to the innocent souls that were lost in the Connecticut elementary school shooting. Newtown, Conn. you're all in my prayers today! Esp. all the children @ Sandy Hook school Such a tragic and scary event! http://t.co/NxCBIRPI. RT @AP MORE: State police respond to report of school shooting in Newtown, Conn.; lockdown in place: http://t.co/NMcOYixP -BW. State Police helicopter circling low in Newtown #schoolshooting http://t.co/wVxy8sBn. RT @JaCharLove_Xo: Wtf is wrong wit people!? Shooting up an elementary school tho? Like were does at make sense at. Another school shooting. Elementary school.,Ugh . Another reason for Americans to feel like the country is coming apart. Horrified as I watch the CT school shooting unfold. Is it time to talk about gun control yet? #utpol. RT @kylebrennan1: Woah! Live interview with a parent in #Newtown just said the Sandy Hook Elementary School principal was shot and killed. What kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school?? people sicken me. RT @amanda_frankel: There was a shooting at an elementary school. T'm loosing all faith in humanity. My prayers and condolences	My prayers go out to everyone affected by the school shooting in Connecticut.
 T'm really over this violence. It HAS got to stop. My thoughts & prayers go out right now living through this fatal school shooting. People are going to do a lot of crazy shit this week. First the shooting in Oregon and now a shooting at an elementary school in Connecticut. My Thoughts and prayers are with the victims of the shooting at the elementary school. So sad. #Pray. BREAKING: More on elementary school shooting: Apparent shooter is an adult, 2 handguns recovered per state official unberlightlynews. BRUH RT @eyewitnessnyc: Official confirms multiple fatalities in Newtown school shooting http://t.co/moc85BdS @breakingnews. A shooting this morning at an elementary school in Connecticut. If we keep glorifying this shit w/ media coverage, it'll continue to happen. RT @GayanMW: Let's take a moment to pay tribute to the innocent souls that were lost in the Connecticut elementary school shooting. Newtown, Conn. you're all in my prayers today! Esp. all the children @ Sandy Hook school Such a tragic and scary event! http://t.co/MxCBIRPI. RT @AP: MORE: State police respond to report of school shooting in Newtown, Conn.; lockdown in place: http://t.co/MxCOYixP -BW. State Police helicopter circling low in Newtown #schoolshooting http://t.co/wVxy8sBn. RT @JaCharLove_Xo: Wtf is wrong wit people!? Shooting up an elementary school tho? Like were does at make sense at. Another school shooting. Elementary school., Ugh . Another reason for Americans to feel like the country is coming apart. Horrified as I watch the CT school shooting unfold. Is it time to talk about gun control yet? #utpol. RT @Aylebrennan1: Woah! Live interview with a parent in #Newtown just said the Sandy Hook Elementary School principal was shot and killed. What kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school?? people sicken me. RT @amanda_frankel: There was a sho	#Breaking: CBS News confirms 27 dead, 14 are children in #Newtown, CT school #shooting.http://t.co/ejk8hBDF
 shooting. People are going to do a lot of crazy shit this week. First the shooting in Oregon and now a shooting at an elementary school in Connecticut. My Thoughts and prayers are with the victims of the shooting at the elementary school. So sad. #Pray. BREAKING: More on elementary school shooting: Apparent shooter is an adult, 2 handguns recovered per state official @nbcnightlynews. BRUH RT @eyewitnessnyc: Official confirms multiple fatalities in Newtown school shooting http://t.co/moc85BdS @breakingnews. A shooting this morning at an elementary school in Connecticut. If we keep glorifying this shit w/ media coverage, it'll continue to happen. RT @GayanMW: Let's take a moment to pay tribute to the innocent souls that were lost in the Connecticut elementary school shooting. Newtown, Conn. you're all in my prayers today! Esp. all the children @ Sandy Hook school Such a tragic and scary event! http://t.co/MxCBIRPI. RT @AP: MORE: State police respond to report of school shooting in Newtown, Conn.; lockdown in place: http://t.co/MNCOYixP -BW. State Police helicopter circling low in Newtown #schoolshooting http://t.co/wVxy8sBn. RT @JaCharLove_Xo: Wtf is wrong wit people!? Shooting up an elementary school tho? Like were does at make sense at. Another school shooting. Elementary school., Ugh . Another reason for Americans to feel like the country is coming apart. Horrified as I watch the CT school shooting unfold. Is it time to talk about gun control yet? #utpol. RT @kylebrennan1: Woah! Live interview with a parent in #Newtown just said the Sandy Hook Elementary School principal was shot and killed. what kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school?? people sicken me. RT @amanda_frankel: There was a shooting at an elementary school for CT. Hug your kids every chance you get. Man is totally depraved. RT @tommytomlins	Listen live http://t.co/MF3LU26R.
 People are going to do a lot of crazy shit this week. First the shooting in Oregon and now a shooting at an elementary school in Connecticut. My Thoughts and prayers are with the victims of the shooting at the elementary school. So sad. #Pray. BREAKING: More on elementary school shooting: Apparent shooter is an adult, 2 handguns recovered per state official @nbcnightlynews. BRUH RT @eyewitnessnyc: Official confirms multiple fatalities in Newtown school shooting http://t.co/moc85BdS @breakingnews. A shooting this morning at an elementary school in Connecticut. If we keep glorifying this shit w/ media coverage, it'll continue to happen. RT @GayanMW: Let's take a moment to pay tribute to the innocent souls that were lost in the Connecticut elementary school shooting. Newtown, Conn. you're all in my prayers today! Esp. all the children @ Sandy Hook school Such a tragic and scary event! http://t.co/WxCBIRPI. RT @AP: MORE: State police respond to report of school shooting in Newtown, Conn.; lockdown in place: http://t.co/NMcOYixP -BW. State Police helicopter circling low in Newtown #schoolshooting http://t.co/Wxy8sBn. RT @JaCharLove.Xo: Wtf is wrong wit people!? Shooting up an elementary school tho? Like were does at make sense at. Another school shooting. Elementary school., Ugh . Another reason for Americans to feel like the country is coming apart. Horrified as I watch the CT school shooting unfold. Is it time to talk about gun control yet? #utpol. RT @Aylebrennan1: Woah! Live interview with a parent in #Newtown just said the Sandy Hook Elementary School principal was shot and killed. what kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school?? people sicken me. RT @amanda_frankel: There was a shooting at an elementary school. T'm loosing all faith in humanity. My prayers and condolences to all affected by the school shooting in	I'm really over this violence. It HAS got to stop. My thoughts & prayers go out right now living through this fatal school
 school in Connecticut. My Thoughts and prayers are with the victims of the shooting at the elementary school. So sad. #Pray. BREAKING: More on elementary school shooting: Apparent shooter is an adult, 2 handguns recovered per state official (anchightlynews.) BRUH RT @eyewitnessnyc: Official confirms multiple fatalities in Newtown school shooting http://t.co/moc85BdS @breakingnews. A shooting this morning at an elementary school in Connecticut. If we keep glorifying this shit w/ media coverage, it'll continue to happen. RT @GayanMW: Let's take a moment to pay tribute to the innocent souls that were lost in the Connecticut elementary school shooting. Newtown, Conn. you're all in my prayers today! Esp. all the children @ Sandy Hook school Such a tragic and scary event! http://t.co/WxCBIRPI. RT @AP: MORE: State police respond to report of school shooting in Newtown, Conn.; lockdown in place: http://t.co/NMcOYixP -BW. State Police helicopter circling low in Newtown #schoolshooting http://t.co/Wxy88Bn. RT @JaCharLove_Xo: Wtf is wrong wit people!? Shooting up an elementary school tho? Like were does at make sense at. Another school shooting. Elementary school.,Ugh . Another reason for Americans to feel like the country is coming apart. Horrified as I watch the CT school shooting unfold. Is it time to talk about gun control yet? #utpol. RT @kylebrennan1: Woah! Live interview with a parent in #Newtown just said the Sandy Hook Elementary School principal was shot and killed. what kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school?? people sicken me. RT @amanda_frankel: There was a shooting at an elementary school. Tim loosing all faith in humanity. My prayers and condolences to all affected by the school shooting. I'm gonna pass on debating guns, or anything 	
 My Thoughts and prayers are with the victims of the shooting at the elementary school. So sad. #Pray. BREAKING: More on elementary school shooting: Apparent shooter is an adult, 2 handguns recovered per state official @nbcnightlynews. BRUH RT @eyewitnessnyc: Official confirms multiple fatalities in Newtown school shooting http://t.co/moc85BdS @breakingnews. A shooting this morning at an elementary school in Connecticut. If we keep glorifying this shit w/ media coverage, it'll continue to happen. RT @GayanMW: Let's take a moment to pay tribute to the innocent souls that were lost in the Connecticut elementary school shooting. Newtown, Conn. you're all in my prayers today! Esp. all the children @ Sandy Hook school Such a tragic and scary event! http://t.co/WxCBIRPI. RT @AP: MORE: State police respond to report of school shooting in Newtown, Conn.; lockdown in place: http://t.co/NMcCOYixP -BW. State Police helicopter circling low in Newtown #schoolshooting http://t.co/Wxy88Bn. RT @JaCharLove_Xo: Wtf is wrong wit people!? Shooting up an elementary school tho? Like were does at make sense at. Another school shooting. Elementary school.,Ugh . Another reason for Americans to feel like the country is coming apart. Horrified as I watch the CT school shooting unfold. Is it time to talk about gun control yet? #utpol. RT @ayanda_frankel: There was a shooting at an elementary school. I'm loosing all faith in humanity. My prayers and condolences to all affected by the school shooting in CT. Hug your kids every chance you get. Man is totally depraved. RT @tommytomlinson: CBS reporting 27 dead in CT school shooting. I'm gonna pass on debating guns, or anything 	People are going to do a lot of crazy shit this week. First the shooting in Oregon and now a shooting at an elementary
BREAKING: More on elementary school shooting: Apparent shooter is an adult, 2 handguns recovered per state official @nbcnightlynews. BRUH RT @eyewitnessnyc: Official confirms multiple fatalities in Newtown school shooting http://t.co/moc85BdS @breakingnews. A shooting this morning at an elementary school in Connecticut. If we keep glorifying this shit w/ media coverage, it'll continue to happen. RT @GayanMW: Let's take a moment to pay tribute to the innocent souls that were lost in the Connecticut elementary school shooting. Newtown, Conn. you're all in my prayers today! Esp. all the children @ Sandy Hook school Such a tragic and scary event! http://t.co/MXcBIRPI. RT @AP: MORE: State police respond to report of school shooting in Newtown, Conn.; lockdown in place: http://t.co/NMcOYixP -BW. State Police helicopter circling low in Newtown #schoolshooting http://t.co/wVxy8sBn. RT @JaCharLove_Xo: Wtf is wrong wit people!? Shooting up an elementary school tho? Like were does at make sense at. Another school shooting. Elementary school.,Ugh . Another reason for Americans to feel like the country is coming apart. Horrified as I watch the CT school shooting unfold. Is it time to talk about gun control yet? #utpol. RT @kylebrennan1: Woah! Live interview with a parent in #Newtown just said the Sandy Hook Elementary School principal was sho and killed. what kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school?? people sicken me. RT @amanda_frankel: There was a shooting at an elementary sch	school in Connecticut.
 @nbcnightlynews. BRUH RT @eyewitnessnyc: Official confirms multiple fatalities in Newtown school shooting http://t.co/moc85BdS @breakingnews. A shooting this morning at an elementary school in Connecticut. If we keep glorifying this shit w/ media coverage, it'll continue to happen. RT @GayanMW: Let's take a moment to pay tribute to the innocent souls that were lost in the Connecticut elementary school shooting. Newtown, Conn. you're all in my prayers today! Esp. all the children @ Sandy Hook school Such a tragic and scary event! http://t.co/WxCBIRPI. RT @AP: MORE: State police respond to report of school shooting in Newtown, Conn.; lockdown in place: http://t.co/NMcOYixP -BW. State Police helicopter circling low in Newtown #schoolshooting http://t.co/wVxy8sBn. RT @JaCharLove_Xo: Wtf is wrong wit people!? Shooting up an elementary school tho? Like were does at make sense at. Another school shooting. Elementary school.,Ugh . Another reason for Americans to feel like the country is coming apart. Horrified as I watch the CT school shooting unfold. Is it time to talk about gun control yet? #utpol. RT @Aylebrennan1: Woah! Live interview with a parent in #Newtown just said the Sandy Hook Elementary School principal was shot and killed. what kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school?? people sicken me. RT @amanda_frankel: There was a shooting at an elementary school. I'm loosing all faith in humanity. My prayers and condelences to all affected by the school shooting in CT. Hug your kids every chance you get. Man is totally depraved. RT @dommytomlinson: CBS reporting 27 dead in CT school shooting. I'm gonna pass on debating guns, or anything 	My Thoughts and prayers are with the victims of the shooting at the elementary school. So sad. #Pray.
 BRUH RT @eyewitnessnyc: Official confirms multiple fatalities in Newtown school shooting http://t.co/moc85BdS @breakingnews. A shooting this morning at an elementary school in Connecticut. If we keep glorifying this shit w/ media coverage, it'll continue to happen. RT @GayanMW: Let's take a moment to pay tribute to the innocent souls that were lost in the Connecticut elementary school shooting. Newtown, Conn. you're all in my prayers today! Esp. all the children @ Sandy Hook school Such a tragic and scary event! http://t.co/WxCBIRPI. RT @AP: MORE: State police respond to report of school shooting in Newtown, Conn.; lockdown in place: http://t.co/NwCYixP -BW. State Police helicopter circling low in Newtown #schoolshooting http://t.co/wVx98Bn. RT @JaCharLove_Xo: Wtf is wrong wit people!? Shooting up an elementary school tho? Like were does at make sense at. Another school shooting. Elementary school.,Ugh . Another reason for Americans to feel like the country is coming apart. Horrified as I watch the CT school shooting unfold. Is it time to talk about gun control yet? #utpol. RT @kylebrennan1: Woah! Live interview with a parent in #Newtown just said the Sandy Hook Elementary School principal was shot and killed. what kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school?? people sicken me. RT @amanda_frankel: There was a shooting at an elementary school. I'm loosing all faith in humanity. My prayers and condolences to all affected by the school shooting in CT. Hug your kids every chance you get. Man is totally depraved. RT @tommytomlinson: CBS reporting 27 dead in CT school shooting. I'm gonna pass on debating guns, or anything 	BREAKING: More on elementary school shooting: Apparent shooter is an adult, 2 handguns recovered per state official
 @breakingnews. A shooting this morning at an elementary school in Connecticut. If we keep glorifying this shit w/ media coverage, it'll continue to happen. RT @GayanMW: Let's take a moment to pay tribute to the innocent souls that were lost in the Connecticut elementary school shooting. Newtown, Conn. you're all in my prayers today! Esp. all the children @ Sandy Hook school Such a tragic and scary event! http://t.co/WxCBIRPI. RT @AP: MORE: State police respond to report of school shooting in Newtown, Conn.; lockdown in place: http://t.co/NMcOYixP -BW. State Police helicopter circling low in Newtown #schoolshooting http://t.co/wVxy8sBn. RT @JaCharLove_Xo: Wtf is wrong wit people!? Shooting up an elementary school tho? Like were does at make sense at. Another school shooting. Elementary school.,Ugh . Another reason for Americans to feel like the country is coming apart. Horrified as I watch the CT school shooting unfold. Is it time to talk about gun control yet? #utpol. RT @kylebrennan1: Woah! Live interview with a parent in #Newtown just said the Sandy Hook Elementary School principal was shot and killed. what kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school?? people sicken me. RT @amanda_frankel: There was a shooting at an elementary school. I'm loosing all faith in humanity. My prayers and condolences to all affected by the school shooting in CT. Hug your kids every chance you get. Man is totally depraved. RT @tommytomlinson: CBS reporting 27 dead in CT school shooting. I'm gonna pass on debating guns, or anything 	@nbcnightlynews.
 A shooting this morning at an elementary school in Connecticut. If we keep glorifying this shit w/ media coverage, it'll continue to happen. RT @GayanMW: Let's take a moment to pay tribute to the innocent souls that were lost in the Connecticut elementary school shooting. Newtown, Conn. you're all in my prayers today! Esp. all the children @ Sandy Hook school Such a tragic and scary event! http://t.co/WxCBIRPI. RT @AP: MORE: State police respond to report of school shooting in Newtown, Conn.; lockdown in place: http://t.co/NMcOYixP -BW. State Police helicopter circling low in Newtown #schoolshooting http://t.co/wVxy8sBn. RT @JaCharLove_Xo: Wtf is wrong wit people!? Shooting up an elementary school tho? Like were does at make sense at. Another school shooting. Elementary school.,Ugh . Another reason for Americans to feel like the country is coming apart. Horrified as I watch the CT school shooting unfold. Is it time to talk about gun control yet? #utpol. RT @kylebrennan1: Woah! Live interview with a parent in #Newtown just said the Sandy Hook Elementary School principal was shot and killed. what kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school?? people sicken me. RT @amanda_frankel: There was a shooting at an elementary school. I'm loosing all faith in humanity. My prayers and condolences to all affected by the school shooting in CT. Hug your kids every chance you get. Man is totally depraved. RT @tommytomlinson: CBS reporting 27 dead in CT school shooting. I'm gonna pass on debating guns, or anything 	
 continue to happen. RT @GayanMW: Let's take a moment to pay tribute to the innocent souls that were lost in the Connecticut elementary school shooting. Newtown, Conn. you're all in my prayers today! Esp. all the children @ Sandy Hook school Such a tragic and scary event! http://t.co/WxCBIRPI. RT @AP: MORE: State police respond to report of school shooting in Newtown, Conn.; lockdown in place: http://t.co/NMcOYixP -BW. State Police helicopter circling low in Newtown #schoolshooting http://t.co/wVxy8sBn. RT @JaCharLove_Xo: Wtf is wrong wit people!? Shooting up an elementary school tho? Like were does at make sense at. Another school shooting. Elementary school.,Ugh . Another reason for Americans to feel like the country is coming apart. Horrified as I watch the CT school shooting unfold. Is it time to talk about gun control yet? #utpol. RT @kylebrennan1: Woah! Live interview with a parent in #Newtown just said the Sandy Hook Elementary School principal was shot and killed. what kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school?? people sicken me. RT @amanda_frankel: There was a shooting at an elementary school. I'm loosing all faith in humanity. My prayers and condolences to all affected by the school shooting in CT. Hug your kids every chance you get. Man is totally depraved. RT @tommytomlinson: CBS reporting 27 dead in CT school shooting. I'm gonna pass on debating guns, or anything 	
 RT @GayanMW: Let's take a moment to pay tribute to the innocent souls that were lost in the Connecticut elementary school shooting. Newtown, Conn. you're all in my prayers today! Esp. all the children @ Sandy Hook school Such a tragic and scary event! http://t.co/WxCBIRPI. RT @AP: MORE: State police respond to report of school shooting in Newtown, Conn.; lockdown in place: http://t.co/NMcOYixP -BW. State Police helicopter circling low in Newtown #schoolshooting http://t.co/WvXy8sBn. RT @JaCharLove_Xo: Wtf is wrong wit people!? Shooting up an elementary school tho? Like were does at make sense at. Another school shooting. Elementary school.,Ugh . Another reason for Americans to feel like the country is coming apart. Horrified as I watch the CT school shooting unfold. Is it time to talk about gun control yet? #utpol. RT @kylebrennan1: Woah! Live interview with a parent in #Newtown just said the Sandy Hook Elementary School principal was shot and killed. what kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school?? people sicken me. RT @manda_frankel: There was a shooting at an elementary school. I'm loosing all faith in humanity. My prayers and condolences to all affected by the school shooting in CT. Hug your kids every chance you get. Man is totally depraved. RT @tommytomlinson: CBS reporting 27 dead in CT school shooting. I'm gonna pass on debating guns, or anything 	A shooting this morning at an elementary school in Connecticut. If we keep glorifying this shit w/ media coverage, it'll
 school shooting. Newtown, Conn. you're all in my prayers today! Esp. all the children @ Sandy Hook school Such a tragic and scary event! http://t.co/WxCBIRPI. RT @AP: MORE: State police respond to report of school shooting in Newtown, Conn.; lockdown in place: http://t.co/NMcOYixP -BW. State Police helicopter circling low in Newtown #schoolshooting http://t.co/wVxy8sBn. RT @JaCharLove_Xo: Wtf is wrong wit people!? Shooting up an elementary school tho? Like were does at make sense at. Another school shooting. Elementary school.,Ugh . Another reason for Americans to feel like the country is coming apart. Horrified as I watch the CT school shooting unfold. Is it time to talk about gun control yet? #utpol. RT @kylebrennan1: Woah! Live interview with a parent in #Newtown just said the Sandy Hook Elementary School principal was shot and killed. what kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school?? people sicken me. RT @amanda_frankel: There was a shooting at an elementary school. I'm loosing all faith in humanity. My prayers and condolences to all affected by the school shooting in CT. Hug your kids every chance you get. Man is totally depraved. RT @tommytomlinson: CBS reporting 27 dead in CT school shooting. I'm gonna pass on debating guns, or anything 	
 Newtown, Con. you're all in my prayers today! Esp. all the children @ Sandy Hook school Such a tragic and scary event! http://t.co/WxCBIRPI. RT @AP: MORE: State police respond to report of school shooting in Newtown, Conn.; lockdown in place: http://t.co/NMcOYixP -BW. State Police helicopter circling low in Newtown #schoolshooting http://t.co/wVxy8sBn. RT @JaCharLove_Xo: Wtf is wrong wit people!? Shooting up an elementary school tho? Like were does at make sense at. Another school shooting. Elementary school.,Ugh . Another reason for Americans to feel like the country is coming apart. Horrified as I watch the CT school shooting unfold. Is it time to talk about gun control yet? #utpol. RT @kylebrennan1: Woah! Live interview with a parent in #Newtown just said the Sandy Hook Elementary School principal was shot and killed. what kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school?? people sicken me. RT @amanda_frankel: There was a shooting at an elementary school. I'm loosing all faith in humanity. My prayers and condolences to all affected by the school shooting. I'm gonna pass on debating guns, or anything 	
 event! http://t.co/WxCBIRPI. RT @AP: MORE: State police respond to report of school shooting in Newtown, Conn.; lockdown in place: http://t.co/NMcOYixP -BW. State Police helicopter circling low in Newtown #schoolshooting http://t.co/wVxy8sBn. RT @JaCharLove_Xo: Wtf is wrong wit people!? Shooting up an elementary school tho? Like were does at make sense at. Another school shooting. Elementary school.,Ugh . Another reason for Americans to feel like the country is coming apart. Horrified as I watch the CT school shooting unfold. Is it time to talk about gun control yet? #utpol. RT @kylebrennan1: Woah! Live interview with a parent in #Newtown just said the Sandy Hook Elementary School principal was shot and killed. what kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school?? people sicken me. RT @amanda_frankel: There was a shooting at an elementary school. I'm loosing all faith in humanity. My prayers and condolences to all affected by the school shooting in CT. Hug your kids every chance you get. Man is totally depraved. RT @tommytomlinson: CBS reporting 27 dead in CT school shooting. I'm gonna pass on debating guns, or anything 	
 RT @AP: MORE: State police respond to report of school shooting in Newtown, Conn.; lockdown in place: http://t.co/NMcOYixP -BW. State Police helicopter circling low in Newtown #schoolshooting http://t.co/wVxy8sBn. RT @JaCharLove_Xo: Wtf is wrong wit people!? Shooting up an elementary school tho? Like were does at make sense at. Another school shooting. Elementary school.,Ugh . Another reason for Americans to feel like the country is coming apart. Horrified as I watch the CT school shooting unfold. Is it time to talk about gun control yet? #utpol. RT @kylebrennan1: Woah! Live interview with a parent in #Newtown just said the Sandy Hook Elementary School principal was shot and killed. what kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school?? people sicken me. RT @amanda_frankel: There was a shooting at an elementary school. I'm loosing all faith in humanity. My prayers and condolences to all affected by the school shooting in CT. Hug your kids every chance you get. Man is totally depraved. RT @tommytomlinson: CBS reporting 27 dead in CT school shooting. I'm gonna pass on debating guns, or anything 	
 http://t.co/NMcOYixP -BW. State Police helicopter circling low in Newtown #schoolshooting http://t.co/wVxy8sBn. RT @JaCharLove_Xo: Wtf is wrong wit people!? Shooting up an elementary school tho? Like were does at make sense at. Another school shooting. Elementary school.,Ugh . Another reason for Americans to feel like the country is coming apart. Horrified as I watch the CT school shooting unfold. Is it time to talk about gun control yet? #utpol. RT @kylebrennan1: Woah! Live interview with a parent in #Newtown just said the Sandy Hook Elementary School principal was shot and killed. what kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school?? people sicken me. RT @amanda_frankel: There was a shooting at an elementary school. I'm loosing all faith in humanity. My prayers and condolences to all affected by the school shooting in CT. Hug your kids every chance you get. Man is totally depraved. RT @tommytomlinson: CBS reporting 27 dead in CT school shooting. I'm gonna pass on debating guns, or anything 	
 State Police helicopter circling low in Newtown #schoolshooting http://t.co/wVxy8sBn. RT @JaCharLove_Xo: Wtf is wrong wit people!? Shooting up an elementary school tho? Like were does at make sense at. Another school shooting. Elementary school.,Ugh . Another reason for Americans to feel like the country is coming apart. Horrified as I watch the CT school shooting unfold. Is it time to talk about gun control yet? #utpol. RT @kylebrennan1: Woah! Live interview with a parent in #Newtown just said the Sandy Hook Elementary School principal was shot and killed. what kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school?? people sicken me. RT @amanda_frankel: There was a shooting at an elementary school. I'm loosing all faith in humanity. My prayers and condolences to all affected by the school shooting in CT. Hug your kids every chance you get. Man is totally depraved. RT @tommytomlinson: CBS reporting 27 dead in CT school shooting. I'm gonna pass on debating guns, or anything 	
 RT @JaCharLove_Xo: Wtf is wrong wit people!? Shooting up an elementary school tho? Like were does at make sense at. Another school shooting. Elementary school.,Ugh . Another reason for Americans to feel like the country is coming apart. Horrified as I watch the CT school shooting unfold. Is it time to talk about gun control yet? #utpol. RT @kylebrennan1: Woah! Live interview with a parent in #Newtown just said the Sandy Hook Elementary School principal was shot and killed. what kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school?? people sicken me. RT @amanda_frankel: There was a shooting at an elementary school. I'm loosing all faith in humanity. My prayers and condolences to all affected by the school shooting in CT. Hug your kids every chance you get. Man is totally depraved. RT @tommytomlinson: CBS reporting 27 dead in CT school shooting. I'm gonna pass on debating guns, or anything 	- / / /
 at. Another school shooting. Elementary school.,Ugh . Another reason for Americans to feel like the country is coming apart. Horrified as I watch the CT school shooting unfold. Is it time to talk about gun control yet? #utpol. RT @kylebrennan1: Woah! Live interview with a parent in #Newtown just said the Sandy Hook Elementary School principal was shot and killed. what kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school?? people sicken me. RT @amanda_frankel: There was a shooting at an elementary school. I'm loosing all faith in humanity. My prayers and condolences to all affected by the school shooting in CT. Hug your kids every chance you get. Man is totally depraved. RT @tommytomlinson: CBS reporting 27 dead in CT school shooting. I'm gonna pass on debating guns, or anything 	
 Another school shooting. Elementary school.,Ugh . Another reason for Americans to feel like the country is coming apart. Horrified as I watch the CT school shooting unfold. Is it time to talk about gun control yet? #utpol. RT @kylebrennan1: Woah! Live interview with a parent in #Newtown just said the Sandy Hook Elementary School principal was shot and killed. what kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school?? people sicken me. RT @amanda_frankel: There was a shooting at an elementary school. I'm loosing all faith in humanity. My prayers and condolences to all affected by the school shooting in CT. Hug your kids every chance you get. Man is totally depraved. RT @tommytomlinson: CBS reporting 27 dead in CT school shooting. I'm gonna pass on debating guns, or anything 	
apart. Horrified as I watch the CT school shooting unfold. Is it time to talk about gun control yet? #utpol. RT @kylebrennan1: Woah! Live interview with a parent in #Newtown just said the Sandy Hook Elementary School principal was shot and killed. what kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school?? people sicken me. RT @amanda_frankel: There was a shooting at an elementary school. I'm loosing all faith in humanity. My prayers and condolences to all affected by the school shooting in CT. Hug your kids every chance you get. Man is totally depraved. RT @tommytomlinson: CBS reporting 27 dead in CT school shooting. I'm gonna pass on debating guns, or anything	
Horrified as I watch the CT school shooting unfold. Is it time to talk about gun control yet? #utpol.RT @kylebrennan1: Woah! Live interview with a parent in #Newtown just said the Sandy Hook Elementary School principal was shot and killed.what kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school?? people sicken me.RT @amanda_frankel: There was a shooting at an elementary school. I'm loosing all faith in humanity.My prayers and condolences to all affected by the school shooting in CT. Hug your kids every chance you get. Man is totally depraved.RT @tommytomlinson: CBS reporting 27 dead in CT school shooting. I'm gonna pass on debating guns, or anything	
 RT @kylebrennan1: Woah! Live interview with a parent in #Newtown just said the Sandy Hook Elementary School principal was shot and killed. what kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school?? people sicken me. RT @amanda_frankel: There was a shooting at an elementary school. I'm loosing all faith in humanity. My prayers and condolences to all affected by the school shooting in CT. Hug your kids every chance you get. Man is totally depraved. RT @tommytomlinson: CBS reporting 27 dead in CT school shooting. I'm gonna pass on debating guns, or anything 	
 principal was shot and killed. what kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school?? people sicken me. RT @amanda_frankel: There was a shooting at an elementary school. I'm loosing all faith in humanity. My prayers and condolences to all affected by the school shooting in CT. Hug your kids every chance you get. Man is totally depraved. RT @tommytomlinson: CBS reporting 27 dead in CT school shooting. I'm gonna pass on debating guns, or anything 	
 what kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school?? people sicken me. RT @amanda_frankel: There was a shooting at an elementary school. I'm loosing all faith in humanity. My prayers and condolences to all affected by the school shooting in CT. Hug your kids every chance you get. Man is totally depraved. RT @tommytomlinson: CBS reporting 27 dead in CT school shooting. I'm gonna pass on debating guns, or anything 	
RT @amanda_frankel: There was a shooting at an elementary school. I'm loosing all faith in humanity. My prayers and condolences to all affected by the school shooting in CT. Hug your kids every chance you get. Man is totally depraved. RT @tommytomlinson: CBS reporting 27 dead in CT school shooting. I'm gonna pass on debating guns, or anything	
My prayers and condolences to all affected by the school shooting in CT. Hug your kids every chance you get. Man is totally depraved. RT @tommytomlinson: CBS reporting 27 dead in CT school shooting. I'm gonna pass on debating guns, or anything	
totally depraved. RT @tommytomlinson: CBS reporting 27 dead in CT school shooting. I'm gonna pass on debating guns, or anything	
RT @tommytomlinson: CBS reporting 27 dead in CT school shooting. I'm gonna pass on debating guns, or anything	
	5 1
else, right now. Go hug yo .	
	else, right now. Go hug yo .

Table 5: Summary	generated by	/ Frequency	y Summarizer	(\mathbf{FS})	Algorithm
Table 9. Dummary	gonorauou Dy	/ IIUquono,	Dummanzor	L D.	

Counselors shid b avail 2 ALL ct school age kids Shooter reported dead at Connecticut elementary school, http://t.co/w8OjtOhL. "@WNEMTV5news: BREAKING: CBS News is reporting up to 27 are dead in an elementary school shooting in Connecticut>http://t.co/s5R5ivEC" WHY?. RT @FoxNews: Multiple deaths reported in shooting at Connecticut elementary school http://t.co/reswQing #Sandy-HookElementarySchool. RT @evewitnessnvc: LIVE: Continuing coverage of Sandy Hook Elementary School shooting in Connecticut http://t.co/EKNr1Xw4. Connecticut elementary school evacuated after reported shooting http://t.co/yTLvl2fT RT @BuzzFeed: Photo from the Newtown Bee of students evacuating elementary school where a possible shooting is being reported http://t.c Newtown, Conn. you're all in my prayers today! Esp. all the children @ Sandy Hook school Such a tragic and scary event! http://t.co/WxCBIRPI. #Breaking: CBS News confirms 27 dead, 14 are children in #Newtown, CT school #shooting.http://t.co/ejk8hBDF Listen live http://t.co/MF3LU26R. State Police helicopter circling low in Newtown #schoolshooting http://t.co/wVxy8sBn. RT @AP: MORE: State police respond to report of school shooting in Newtown, Conn.; lockdown in place: http://t.co/NMcOYixP -BW. BRUH RT @eyewitnessnyc: Official confirms multiple fatalities in Newtown school shooting http://t.co/moc85BdS @breakingnews. Shooting at a Connecticut elementary school.,Luckily, my son attends a different one.,Our hearts go out to all involved with this tragedy. People are going to do a lot of crazy shit this week. First the shooting in Oregon and now a shooting at an elementary school in Connecticut. AP now reporting 27 dead, including 18 children at Connecticut school shooting. One gunman dead, one still loose, says ABC. A shooting this morning at an elementary school in Connecticut. If we keep glorifying this shit w/ media coverage, it'll continue to happen. RT @piersmorgan: Another day, another horrific shooting - this time at an elementary school in Connecticut. America's gun culture has to . RT @GayanMW: Let's take a moment to pay tribute to the innocent souls that were lost in the Connecticut elementary school shooting. RT @FrankKnuckles: LORD HAVE MERCY: Pray 4 the families of this Connecticut elementary school shooting. My heart goes out to all the kids, families and workers involved in the elementary school shooting in Connecticut this morning. My prayers go out to all of the families affected in the Connecticut elementary school shooting. Table 6: Summary generated by LexRank(LR) algorithm

RT @tommytomlinson: CBS reporting 27 dead in CT school shooting.
Counselors shid b avail 2 ALL ct school age kids Shooter reported dead at Connecticut elementary
school,http://t.co/w8OjtOhL.
Shooting at a Connecticut elementary school.
RT @piersmorgan: Any moment now, a gun nut will tweet me saying 'If all the kids in that school had been armed, the
shooters would have .
"@WNEMTV5news: BREAKING: CBS News is reporting up to 27 are dead in an elementary school shooting in Con-
necticut>http://t.co/s5R5ivEC" WHY?.
Multiple people dead including children in a CT school shooting.
A shooting in an elementary school?
RT @Autumn_Rose8: My heart goes out to the people of Newtown and all those involved in the #SandyHook Shooting.
People are going to do a lot of crazy shit this week.
RT @amanda_frankel: There was a shooting at an elementary school.
AP now reporting 27 dead, including 18 children at Connecticut school shooting.
RT @FoxNews: Multiple deaths reported in shooting at Connecticut elementary school http://t.co/reswQing #Sandy-
HookElementarySchool.
RT @FrankKnuckles: LORD HAVE MERCY: Pray 4 the families of this Connecticut elementary school shooting.
RT @KatyBaby02: Wtf a shooting in newtown elementary school 10 kids shot what has this world come to.
Another school shooting.
Connecticut elementary school evacuated after reported shooting http://t.co/yTLvl2fT.
Elementary school.
RT @CBS6: BREAKING: The principal and a school psychologist were killed in elementary school shooting
http://t.co/tpfRXdZ2 #CT. RT @eyewitnessnyc: LIVE:
Continuing coverage of Sandy Hook Elementary School shooting in Connecticut http://t.co/EKNr1Xw4

Continuing coverage of Sandy Hook Elementary School shooting in Connecticut http://t.co/EKNr1Xw4.

My prayers go out to all of the families affected in the Connecticut elementary school shooting.

Table 7: S	Summary	generated	by LSA	LS) Algorithm

RT @BuzzFeed: Photo from the Newtown Bee of students evacuating elementary school where a possible shooting is being reported http://t.c . RT @1010WINSNewYork: #Breaking: CBS News confirms 27 dead, 14 are children in #Newtown, CT school #shooting.http://t.co/ejk8hBDF Listen . RT @piersmorgan: Any moment now, a gun nut will tweet me saying 'If all the kids in that school had been armed, the shooters would have . "@WNEMTV5news: BREAKING: CBS News is reporting up to 27 are dead in an elementary school shooting in Connecticut>http://t.co/s5R5ivEC" WHY?. RT @derrickAaron: An elementary school shooting is one of the saddest things I've ever heard. #Breaking: CBS News confirms 27 dead, 14 are children in #Newtown, CT school #shooting.http://t.co/ejk8hBDF Listen live http://t.co/MF3LU26R. BREAKING: More on elementary school shooting: Apparent shooter is an adult, 2 handguns recovered per state official @nbcnightlynews. school in two weeks omg can someone pls shoot me im not ready yet omfg i wanna cry. RT @piersmorgan: Another day, another horrific shooting - this time at an elementary school in Connecticut. RT @FoxNews: Multiple deaths reported in shooting at Connecticut elementary school http://t.co/reswQing #Sandy-HookElementarySchool. RT @GayanMW: Let's take a moment to pay tribute to the innocent souls that were lost in the Connecticut elementary school shooting. RT @FrankKnuckles: LORD HAVE MERCY: Pray 4 the families of this Connecticut elementary school shooting. RT @CP24: A gunman was killed in the shooting at an elementary school in Newtown, Conn., local official tells AP. RT @KatyBaby02: Wtf a shooting in newtown elementary school 10 kids shot what has this world come to. RT @AP: MORE: State police respond to report of school shooting in Newtown, Conn.; lockdown in place: http://t.co/NMcOYixP -BW. BRUH RT @eyewitnessnyc: Official confirms multiple fatalities in Newtown school shooting http://t.co/moc85BdS @breakingnews. Live interview with a parent in #Newtown just said the Sandy Hook Elementary School principal was shot and killed.

My heart goes out to all the kids, families and workers involved in the,elementary school shooting in Connecticut this morning.

Wtf a shooting in newtown elementary school 10 kids shot what has this world come to.

Oh shit shooting in a school in CT, hope girls steph and paul are fine.

Table 8: Summary generated by LUHN (LH) Algorithm

RT @tommytomlinson: CBS reporting 27 dead in CT school shooting. Counselors shid b avail 2 ALL ct school age kids Shooter reported dead at Connecticut elementary school, http://t.co/w8OjtOhL. RT @1010WINSNewYork: #Breaking: CBS News confirms 27 dead, 14 are children in #Newtown, CT school #shooting.http://t.co/ejk8hBDF Listen . "@WNEMTV5news: BREAKING: CBS News is reporting up to 27 are dead in an elementary school shooting in Connecticut>http://t.co/s5R5ivEC" WHY?. Newtown, Conn. you're all in my prayers today! Esp. all the children @ Sandy Hook school Such a tragic and scary event! http://t.co/WxCBIRPI. Multiple people dead including children in a CT school shooting. #Breaking: CBS News confirms 27 dead, 14 are children in #Newtown, CT school #shooting.http://t.co/ejk8hBDF Listen live http://t.co/MF3LU26R. AP now reporting 27 dead, including 18 children at Connecticut school shooting. RT @piersmorgan: Another day, another horrific shooting - this time at an elementary school in Connecticut. RT @FoxNews: Multiple deaths reported in shooting at Connecticut elementary school http://t.co/reswQing #Sandy-HookElementarySchool. RT @CP24: A gunman was killed in the shooting at an elementary school in Newtown, Conn., local official tells AP. RT @KatyBaby02: Wtf a shooting in newtown elementary school 10 kids shot what has this world come to. RT @AP: MORE: State police respond to report of school shooting in Newtown, Conn.; lockdown in place: http://t.co/NMcOYixP -BW. BRUH RT @eyewitnessnyc: Official confirms multiple fatalities in Newtown school shooting http://t.co/moc85BdS @breakingnews. Live interview with a parent in #Newtown just said the Sandy Hook Elementary School principal was shot and killed. RT @CBS6: BREAKING: The principal and a school psychologist were killed in elementary school shooting http://t.co/tpfRXdZ2 #CT. RT @eyewitnessnyc: LIVE: Continuing coverage of Sandy Hook Elementary School shooting in Connecticut http://t.co/EKNr1Xw4. My heart goes out to all the kids, families and workers involved in the elementary school shooting in Connecticut this morning.

My prayers go out to all of the families affected in the Connecticut elementary school shooting.

Wtf a shooting in newtown elementary school 10 kids shot what has this world come to.

Table 9: Summary generated by Mead (MD) Algorithm

RT @tommytomlinson: CBS reporting 27 dead in CT school shooting.
I'm gonna pass on debating guns, or anything else, right now.
Oh shit shooting in a school in CT, hope girls steph and paul are fine.
Counselors shid b avail 2 ALL ct school age kids Shooter reported dead at Connecticut elementary school
http://t.co/w8OjtOhL.
RT @BuzzFeed: Photo from the Newtown Bee of students evacuating elementary school where a possible shooting is
being reported http://t.c .
"@WNEMTV5news: BREAKING: CBS News is reporting up to 27 are dead in an elementary school shooting in Con-
necticut>http://t.co/s5R5ivEC" WHY?.
Horrified as I watch the CT school shooting unfold.
Multiple people dead including children in a CT school shooting.
First the shooting in Oregon and now a shooting at an elementary school in Connecticut.
RT @piersmorgan: Another day, another horrific shooting - this time at an elementary school in Connecticut.
RT @FoxNews: Multiple deaths reported in shooting at Connecticut elementary school http://t.co/reswQing #Sandy-
HookElementarySchool.
RT @GayanMW: Let's take a moment to pay tribute to the innocent souls that were lost in the Connecticut elementary
school shooting.
RT @FrankKnuckles: LORD HAVE MERCY: Pray 4 the families of this Connecticut elementary school shooting.
RT @CP24: A gunman was killed in the shooting at an elementary school in Newtown, Conn., local official tells AP.
RT @KatyBaby02: Wtf a shooting in newtown elementary school 10 kids shot what has this world come to.
My Thoughts and prayers are with the victims of the shooting at the elementary school.
RT @CBS6: BREAKING: The principal and a school psychologist were killed in elementary school shooting
http://t.co/tpfRXdZ2 #CT.
My heart goes out to all the kids, families and workers involved in the elementary school shooting in Connecticut this
morning.
My prayers go out to all of the families affected in the Connecticut elementary school shooting.
My prayers and condolences to all affected by the school shooting in CT.

Table 10: Summary generated by SumBasic (SB) Algorithm

Shooting at a Connecticut elementary school, Luckily, my son attends a different one. Our hearts go out to all involved with this tragedy. A shooting this morning at an elementary school in Connecticut. If we keep glorifying this shit w/ media coverage, it'll continue to happen. RT @1010WINSNewYork: #Breaking: CBS News confirms 27 dead, 14 are children in #Newtown, CT school #shooting.http://t.co/ejk8hBDF Listen . Newtown, Conn. you're all in my prayers today!Esp. all the children @ Sandy Hook school Such a tragic and scary event! http://t.co/WxCBIRPI. A shooting in an elementary school? Really? There are truly some awful people in this world #senseless #justchildren. Horrified as I watch the CT school shooting unfold. Is it time to talk about gun control yet? #utpol. Wow! I'm so disgusted. Multiple people dead including children in a CT school shooting. Smh! RIP!!!. State Police helicopter circling low in Newtown #schoolshooting http://t.co/wVxy8sBn. what kind of sadistic mother fucker do you have to be to shoot up a fucking elementary school?? people sicken me. My Thoughts and prayers are with the victims of the shooting at the elementary school. So sad. #Pray. RT @RHHIBent: "@slicKGilchrist: School shooting reported in Conn. this morning. I'm really over this violence. It HAS got to stop. My thoughts & prayers go out right now living through this fatal school shooting. RT @kylebrennan1: Woah! Live interview with a parent in #Newtown just said the Sandy Hook Elementary School principal was shot and killed. Live interview with a parent in #Newtown just said the Sandy Hook Elementary School principal was shot and killed. Who the fuck goes to an elementary school and shoots kids? 27 dead already, what a shame. #prayers. My prayers and condolences to all affected by the school shooting in CT. Hug your kids every chance you get. Man is totally depraved. BREAKING: More on elementary school shooting: Apparent shooter is an adult, 2 handguns recovered per state official @nbcnightlynews. RT @GavanMW: Let's take a moment to pay tribute to the innocent souls that were lost in the Connecticut elementary school shooting. RT @1010WINSNewYork: #Breaking: CBS News confirms 27 dead, 14 are children in #Newtown, CT school #shooting.http://t.co/ejk8hBDF Listen . Another school shooting. Elementary school, Ugh . Another reason for Americans to feel like the country is coming apart.

Table 11: Summary generated by SumDSDR (Document Summarization based on Data Reconstruction) Algorithm

A shooting in an elementary school? Really?, There are truly some awful people in this world #senseless #justchildren.
My prayers go out to all of the families affected in the Connecticut elementary school shooting.
#Breaking: CBS News confirms 27 dead, 14 are children in #Newtown, CT school #shooting.http://t.co/ejk8hBDF
Listen live http://t.co/MF3LU26R.
Another school shooting. Elementary school., Ugh . Another reason for Americans to feel like the country is coming
apart.
RT @KatyBaby02: Wtf a shooting in newtown elementary school 10 kids shot what has this world come to.
RT @RHHIBent: "@slicKGilchrist: School shooting reported in Conn. this morning. SMH! http://t.co/ghEOEx50" This
has got to stop. Pray fo .
A shooting this morning at an elementary school in Connecticut. If we keep glorifying this shit w/ media coverage, it'll
continue to happen.
Who the fuck goes to an elementary school and shoots kids? 27 dead already, what a shame. #prayers.
AP now reporting 27 dead, including 18 children at Connecticut school shooting. One gunman dead, one still loose, says
ABC.
RT @CP24: A gunman was killed in the shooting at an elementary school in Newtown, Conn., local official tells AP.
I'm really over this violence. It HAS got to stop. My thoughts & prayers go out right now living through this fatal school
shooting.
RT @FoxNews: Multiple deaths reported in shooting at Connecticut elementary school http://t.co/reswQing #Sandy-
HookElementarySchool.
My Thoughts and prayers are with the victims of the shooting at the elementary school. So sad. #Pray.
Another school shooting. People will say it's "unacceptable." A lie, of course, when you consider nothing will be done
about it.
Live interview with a parent in #Newtown just said the Sandy Hook Elementary School principal was shot and killed.
Who the fuck goes to an elementary school and shoots kids? 27 dead already, what a shame. #prayers.
Horrified as I watch the CT school shooting unfold. Is it time to talk about gun control yet? #utpol.
RT @Autumn_Rose8: My heart goes out to the people of Newtown and all those involved in the #SandyHook Shooting.
Such a tragedy.
AP now reporting 27 dead, including 18 children at Connecticut school shooting. One gunman dead, one still loose, says
ABC.

RT @KatyBaby02: Wtf a shooting in newtown elementary school 10 kids shot what has this world come to.

Table 12: Summary generated by VecSim-ConComp-maxSumTFIDF ensemble algorithm

"@WNEMTV5news: BREAKING: CBS News is reporting up to 27 are dead in an elementary school shooting in Connecticut>http://t.co/s5R5ivEC" WHY?.

RT @AP: MORE: State police respond to report of school shooting in Newtown, Conn.; lockdown in place: http://t.co/NMcOYixP -BW.

RT @BuzzFeed: Photo from the Newtown Bee of students evacuating elementary school where a possible shooting is being reported http://t.c.

RT @1010WINSNewYork: #Breaking: CBS News confirms 27 dead, 14 are children in #Newtown, CT school #shooting.http://t.co/ejk8hBDF Listen .

#Breaking: CBS News confirms 27 dead, 14 are children in #Newtown, CT school #shooting.http://t.co/ejk8hBDF Listen live http://t.co/MF3LU26R.

Counselors shid b avail 2 ALL ct school age kids Shooter reported dead at Connecticut elementary school, http://t.co/w8OjtOhL.

A shooting this morning at an elementary school in Connecticut. If we keep glorifying this shit w/ media coverage, it'll continue to happen.

RT @tommytomlinson: CBS reporting 27 dead in CT school shooting.

RT @kylebrennan1: Woah! Live interview with a parent in #Newtown just said the Sandy Hook Elementary School principal was shot and killed.

Newtown, Conn. you're all in my prayers today! Esp. all the children @ Sandy Hook school Such a tragic and scary event! http://t.co/WxCBIRPI.

RT @CBS6: BREAKING: The principal and a school psychologist were killed in elementary school shooting http://t.co/tpfRXdZ2 #CT. RT @eyewitnessnyc: LIVE:

Continuing coverage of Sandy Hook Elementary School shooting in Connecticut http://t.co/EKNr1Xw4.

Who the fuck goes to an elementary school and shoots kids?

RT @JaCharLove_Xo: Wtf is wrong wit people!? Shooting up an elementary school tho? Like were does at make sense at.

Counselors shid b avail 2 ALL ct school age kids Shooter reported dead at Connecticut elementary school http://t.co/w8OjtOhL.

RT @eyewitnessnyc: LIVE: Continuing coverage of Sandy Hook Elementary School shooting in Connecticut http://t.co/EKNr1Xw4.

RT @tommytomlinson: CBS reporting 27 dead in CT school shooting. I'm gonna pass on debating guns, or anything else, right now. Go hug yo .Counselors shld b

avail 2 ALL ct school age kids Shooter reported dead at Connecticut elementary school, http://t.co/w8OjtOhL.

RT @CBS6: BREAKING: The principal and a school psychologist were killed in elementary school shooting http://t.co/tpfRXdZ2 #CT.

Wow! I'm so disgusted. Multiple people dead including children in a CT school shooting. Smh! RIP!!!.

Table 13: Summary generated by VecSim-ConComp-maxLen ensemble algorithm

RT @KatyBaby02: Wtf a shooting in newtown elementary school 10 kids shot what has this world come to.
RT @GayanMW: Let's take a moment to pay tribute to the innocent souls that were lost in the Connecticut elementary
school shooting.
RT @BuzzFeed: Photo from the Newtown Bee of students evacuating elementary school where a possible shooting is
being reported http://t.c .
RT @CP24: A gunman was killed in the shooting at an elementary school in Newtown, Conn., local official tells AP.
A shooting this morning at an elementary school in Connecticut. If we keep glorifying this shit w/ media coverage, it'll
continue to happen.
Counselors shid b avail 2 ALL ct school age kids Shooter reported dead at Connecticut elementary
school,http://t.co/w8OjtOhL.
RT @tommytomlinson: CBS reporting 27 dead in CT school shooting.
Live interview with a parent in #Newtown just said the Sandy Hook Elementary School principal was shot and killed.
RT @kylebrennan1: Woah! Live interview with a parent in #Newtown just said the Sandy Hook Elementary School
principal was shot and killed.
AP now reporting 27 dead, including 18 children at Connecticut school shooting. One gunman dead, one still loose, says
ABC.
RT @CBS6: BREAKING: The principal and a school psychologist were killed in elementary school shooting
http://t.co/tpfRXdZ2 #CT. RT @eyewitnessnyc: LIVE:
Continuing coverage of Sandy Hook Elementary School shooting in Connecticut http://t.co/EKNr1Xw4.
BREAKING: More on elementary school shooting: Apparent shooter is an adult, 2 handguns recovered per state official
@nbcnightlynews.
RT @piersmorgan: Any moment now, a gun nut will tweet me saying 'If all the kids in that school had been armed, the
shooters would have .
Counselors shid b avail 2 ALL ct school age kids Shooter reported dead at Connecticut elementary school
http://t.co/w8OjtOhL.
Shooting at a Connecticut elementary school.,Luckily, my son attends a different one.,Our hearts go out to all involved
with this tragedy.
RT @tommytomlinson: CBS reporting 27 dead in CT school shooting. I'm gonna pass on debating guns, or anything
else, right now. Go hug yo .Counselors shld b
avail 2 ALL ct school age kids Shooter reported dead at Connecticut elementary school, http://t.co/w8OjtOhL.
RT @JaCharLove_Xo: Wtf is wrong wit people!? Shooting up an elementary school tho? Like were does at make sense
at.
Wow! I'm so disgusted. Multiple people dead including children in a CT school shooting. Smh! RIP!!!.

Table 14: Summary generated by VecSim-Community-maxSumTFIDF ensemble algorithm

"@WNEMTV5news: BREAKING: CBS News is reporting up to 27 are dead in an elementary school shooting in Connecticut>http://t.co/s5R5ivEC" WHY?.

RT @AP: MORE: State police respond to report of school shooting in Newtown, Conn.; lockdown in place: http://t.co/NMcOYixP -BW.

RT @BuzzFeed: Photo from the Newtown Bee of students evacuating elementary school where a possible shooting is being reported http://t.c.

RT @1010WINSNewYork: #Breaking: CBS News confirms 27 dead, 14 are children in #Newtown, CT school #shoot-ing.http://t.co/ejk8hBDF Listen .

#Breaking: CBS News confirms 27 dead, 14 are children in #Newtown, CT school #shooting.http://t.co/ejk8hBDF Listen live http://t.co/MF3LU26R.

A shooting this morning at an elementary school in Connecticut. If we keep glorifying this shit w/ media coverage, it'll continue to happen.

RT @tommytomlinson: CBS reporting 27 dead in CT school shooting.

Counselors shld b avail 2 ALL ct school age kids Shooter reported dead at Connecticut elementary school, http://t.co/w8OjtOhL.

RT @kylebrennan1: Woah! Live interview with a parent in #Newtown just said the Sandy Hook Elementary School principal was shot and killed.

Newtown, Conn. you're all in my prayers today! Esp. all the children @ Sandy Hook school Such a tragic and scary event! http://t.co/WxCBIRPI.

RT @CBS6: BREAKING: The principal and a school psychologist were killed in elementary school shooting http://t.co/tpfRXdZ2 #CT. RT @eyewitnessnyc: LIVE:

Continuing coverage of Sandy Hook Elementary School shooting in Connecticut http://t.co/EKNr1Xw4.

Who the fuck goes to an elementary school and shoots kids?

RT @JaCharLove_Xo: Wtf is wrong wit people!? Shooting up an elementary school tho? Like were does at make sense at.

Counselors shid b avail 2 ALL ct school age kids Shooter reported dead at Connecticut elementary school http://t.co/w8OjtOhL.

RT @eyewitnessnyc: LIVE: Continuing coverage of Sandy Hook Elementary School shooting in Connecticut http://t.co/EKNr1Xw4.

RT @tommytomlinson: CBS reporting 27 dead in CT school shooting. I'm gonna pass on debating guns, or anything else, right now. Go hug yo .Counselors shld b

avail 2 ALL ct school age kids Shooter reported dead at Connecticut elementary school, http://t.co/w8OjtOhL.

RT @CBS6: BREAKING: The principal and a school psychologist were killed in elementary school shooting http://t.co/tpfRXdZ2 #CT.

Wow! I'm so disgusted. Multiple people dead including children in a CT school shooting. Smh! RIP!!!.