

The Gun Violence Database: A new task and data set for NLP

Supplementary Material

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<p>Time and Place</p> <p>City</p> <p>State</p> <p>Other details (home, school, etc.)</p> <p>Date (DD/MM/YYYY)</p> <p>Clock Time (HH:MM)</p> <p>Time of day (e.g. morning/afternoon/night)</p>
<p>Alleged Shooter(s)</p> <p>Name</p> <p>Gender</p> <p>Age</p> <p>Race</p>
<p>Victim(s)</p> <p>Name</p> <p>Gender</p> <p>Age</p> <p>Race</p> <p>Was the victim injured?</p> <p>Was the victim hospitalized?</p> <p>Was the victim killed?</p>
<p>Circumstances of shooting</p> <p>Type of gun</p> <p>Number of shots fired</p> <p><i>Answer Yes/No/Not able to determine</i></p> <p>The shooter and the victim knew each other.</p> <p>The incident was a case of domestic violence.</p> <p>The firearm was used during another crime.</p> <p>The firearm was used in self defense.</p> <p>Alcohol was involved.</p> <p>Drugs (other than alcohol) were involved.</p> <p>The shooting was self-directed.</p> <p>The shooting was a suicide or suicide attempt.</p> <p>The shooting was unintentional.</p> <p>The shooting was by a police officer.</p> <p>The shooting was directed at a police officer.</p> <p>The firearm was stolen.</p> <p>The firearm was owned by the victim/victim's family.</p>

Table 1: The full list of questions we ask annotators to answer about each article.

Read the text of the article carefully. Afterward, please answer the questions about the information in the article. You will be asked two types of questions:

1. Yes/No questions about the circumstances of the shooting described in the article. For these questions, please base your answers **only on the information in the article**. You should answer “Not mentioned” unless the answer to the question is explicitly given, or you can very confidently infer the answer from the text.
2. Descriptive information about people and places. For these questions, you will be asked to highlight a span in the text which contains the answer to the question.

Tips and examples:

* For yes/no questions, use your best judgement when making inferences. If unsure, you should choose “Not mentioned”. For example, in most cases, you should answer “Not mentioned” for the question “Was alcohol involved in the shooting?” unless the article explicitly says that alcohol was involved. However, if the article describes a 5 year old boy would accidentally fires a gun while playing, it would be okay to answer “No” for the question “Was alcohol involved in the shooting?” since it is reasonable to infer that the 5 year old was not under the influence of alcohol.

* For highlighting questions, you should try to highlight the smallest span possible that contains a complete answer to the question. For example, the article may contain the sentence “The shooting took place at 11:30 am in the parking lot of the school.” When asked to indicate clock time, you should highlight 11:30 am and NOT The shooting took place at 11:30 am. If you can’t find the answer, leave the input blank.

* “Clock time” refers to the exact time of the shooting, e.g. 11:30 am. “Time of day” refers to the approximate time of the shooting, e.g. “afternoon” or “after dark.”

Table 2: Instructions given to annotators at the start of each article.

INFORMATION EXTRACTION

[+MORE INFORMATION](#)

Read the text carefully. Please highlight the parts of the text that correspond with the below information, if they exist. For example, if the text mentions that the shooting was on the afternoon of Saturday May 26th, please highlight 'afternoon' and select 'time of day'.

PLEASE READ THE INSTRUCTIONS BEFORE YOU START WORKING ON THIS HIT: [SHOW DETAILED INSTRUCTIONS](#)

<p>publication date: December 7, 2015</p> <p>Man, 27, shot twice in Meatpacking District after fender bender with minivan: officials</p> <p>A fender bender in the Meatpacking District left a 27-year-old motorist in the hospital early Tuesday, but not in a way one would expect, officials said. The motorist was shot in the arm and the hip after he got into a fiery exchange with a man in a grey minivan. The minivan driver slammed into his car as he pulled out of a spot on Gansevoort and W. 13th Sts., officials said. The victim had just pulled out onto the street when he collided with the minivan about 4:15 a.m., cops said. But, instead of getting out of their cars to exchange information, the two exchanged curses and insults, cops were told. As the argument became more and more heated, the minivan driver pulled a gun and started blasting away, striking the victim twice before</p>	<p>Before you start working on this HIT, please read article carefully and decide whether it's related to gun violence. If you decide that this article is not related to gun violence, it will be replace with another article. There is also a possibility that even if article is related to gun violence it doesn't describe a single event or for some other reasons you are not able to work on this HIT, then please check the answer that says the article is beyond the scope of this HIT and explain why.</p> <p><input type="radio"/> Not Related To Gun Violence</p> <p><input checked="" type="radio"/> Continue To Work On This Article</p> <p><input type="radio"/> Gun Violence Article But Beyond The Scope Of This HIT</p> <p><input type="button" value="Confirm"/></p>
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Figure 1: Before extracting information from an article in order to populate the database, workers confirm that the article is/is not describing a specific incident of gun violence.

A fender bender in the Meatpacking District left a 27-year-old motorist in the hospital early Tuesday, but not in a way one would expect, officials said. The motorist was shot in the arm and the hip after he got into a fiery exchange with a man in a grey minivan. The minivan driver slammed into his car as he pulled out of a spot on Gansevoort and W. 13th Sts., officials said. The victim had just pulled out onto the street when he collided with the minivan about 4:15 a.m., cops said. But, instead of getting out of their cars to exchange information, the two exchanged curses and insults, cops were told. As the argument became more and more heated, the minivan driver pulled a gun and started blasting away, striking the victim twice before speeding off, cops said. Although he was injured, the victim also jumped into his car and sped off, police were told. He ultimately stopped two blocks away on Washington St. near W. 14th St., where he called 911. He was recovering at Bellevue Hospital Tuesday, officials said. Cops were looking for the shooter Tuesday morning.

Please read the text carefully, and then select an answer for all questions. Please base your answers only on information that is explicitly stated or can be confidently inferred from the text of the article.

Alcohol was involved.

Yes No Not Mentioned

Drugs (other than alcohol) were involved.

Yes No Not Mentioned

The shooting was self-directed.

Yes No Not Mentioned

The shooting was a suicide or suicide attempt.

Yes No Not Mentioned

Task 2/7

Figure 2: Annotators first answer a series of yes/no questions about the circumstances of the shooting described in the article.

Man, 27, shot twice in Meatpacking District after fender bender with minivan: officials

A fender bender in the Meatpacking District left a 27-year-old motorist in the hospital early Tuesday, but not in a way one would expect, officials said. The motorist was shot in the arm and the hip after he got into a fiery exchange with a man in a grey minivan. The minivan driver slammed into his car as he pulled out of a spot on Gansevoort and W. 13th Sts., officials said. The victim had just pulled out onto the street when he collided with the minivan about 4:15 a.m., cops said. But, instead of getting out of their cars to exchange information, the two exchanged curses and insults, cops were told. As the argument became more and more heated, the minivan driver pulled a gun and started blasting away, striking the victim twice before speeding off, cops said. Although he was injured, the victim also jumped into his car and sped off, police were told. He ultimately stopped two blocks away on Washington St. near W. 14th St., where he called 911.

City: Meatpacking District Clock Time (p.m., 2:37a.m.): 4:15 a.m. Time Of Day (Morning, Evening): Morning Additional Location Details: Washington St. near W. 14th St.

First, try to figure out the date of the described event, and select it by clicking on the calendar icon. The publication date and the day of week mentioned in article are helpful in determining the date of the shooting. Next, click on parts of the text that correspond to the other information listed below, if that information is present in the article. When you highlight a passage of text in the article, you will get a dropdown menu that lets you select which question it answers.

Date:

State:

City: ✕

Clock Time (p.m., 2:37a.m.):

Time Of Day (Morning, Evening):

Figure 3: Annotators then highlight specific spans of text in the article which correspond to specific pieces of information about the incident, e.g. the name of the shooter. When an annotator highlights a span, they are given a choice of which field the span corresponds to. The annotators can not enter answers directly as free-text.

publication date: December 7, 2015

Man, 27, shot twice in Meatpacking District after fender bender with minivan: officials

A fender bender in the Meatpacking District left a 27-year-old motorist in the hospital early Tuesday, but not in a way one would expect, officials said. The motorist was shot in the arm and the hip after he got into a fiery exchange with a man in a grey minivan. The minivan driver slammed into his car as he pulled out of a spot on Gansevoort and W. 13th Sts., officials said. The victim had just pulled out onto the street when he collided with the minivan about 4:15 a.m., cops said. But, instead of getting out of their cars to exchange information, the two exchanged curses and insults, cops were told. As the argument became more and more heated, the minivan driver pulled a gun and started blasting away, striking the victim twice before

Name: 27-year-old Age: Meatpacking District Race: Gansevoort and W. 13th Sts.

Fill out the fields below by highlighting text from the article and choosing from the dropdown menu. If there are multiple victims mentioned in article, create a new tab with the 'Add victim' button. Fill in the information about each of them by highlighting the text. If you clicked 'Shooter was also a victim' on the previous page, you do not need to fill out information about that person again.

Victim #1 ▲

Name:

Age: ✕

Gender:

Race:

Victim was:

Killed Injured Hospitalized

Figure 4: The annotators populate the database by highlighting spans and selecting the corresponding field, rather than entering information as free text. This ensures a clear mapping between information in the database and natural language text in the article, and makes it easier to train automated systems to reproduce the extracted information.

Read the texts below. Are both related to the same event? ?

Memphis Officer Shot During Traffic Stop | National News - WCVB Home

CRAWLED DATE: 8/3/2015

Authorities say Officer Sean Bolton died after he was shot during a traffic stop in Memphis Saturday night. Authorities say Officer Sean Bolton died after he was shot during a traffic stop in Memphis Saturday night.

Police Identify Suspect In Memphis Officer's Killing

CRAWLED DATE: 8/3/2015

Police in Memphis identified a 29-year-old convicted bank robber as the man who allegedly killed a city cop during a traffic stop on Saturday. Police director Toney Armstrong on Sunday evening told reporters that officer Sean Bolton apparently interrupted a drug deal and that after "some type of physical altercation," Bolton was shot and killed by a passenger in the car. Armstrong said police were searching for 29-year-old Tremaine Wilbourn and had issued a warrant for his arrest. Wilbourn had been free on supervised release by the U.S. Western

Figure 5: Annotation interface for soon-to-come event coreference annotation. Workers view two articles and determine whether or not they describe the same event.

Below you can see list of victims/shooter that we got from two different articles. Please match people from the first article with people from the second article.



[Read the article](#)

Victim #1a

NAME: Sean Bolton
AGE: unknown
RACE: unknown
GENDER: Male
VICTIM WAS: killed

✓
No match
Victim #2a Officer Sean Bolton

[Read article](#)

Victim #2a

NAME: Officer Sean Bolton
AGE: 33
RACE: unknown
GENDER: Male
VICTIM WAS: killed

Figure 6: Annotation interface for soon-to-come cross-document entity coreference annotation. Workers view profiles of two entities from two different articles and determine whether or not they describe the same person.