**Annotation Guidelines**

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**Suicide Detection**

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# **Introduction**

Suicide is death caused by injuring oneself with the intent to die. Every year nearly 850,000 people around the world take their own lives. Although suicide is a major health problem, it can often be prevented.

Many factors can increase the risk for suicide or protect against it. Suicide is connected to other forms of injury, violence, substance use, and underlying several diseases including depression and anxiety. For example, people who have experienced violence, including child abuse, bullying or sexual violence have a higher suicide risk. Being connected to family and community support and having easy access to health care may decrease suicidal thoughts and behaviors.

The goal of annotation for this project is to train machine learning models for natural language processing focused on extracting terminology related to suicidal thoughts, behaviors and underlying traumas.

These annotation Guidelines (AG) define the entities to be extracted and the way they have to be extracted, with the aim of assuring consistency between annotators and serve as a reference for data scientists and other professionals involved in the development of the models and applications.

The annotation of entities related to suicide are explained in detail in these AG.

# **Entity Labels**

For each kind of entity, these AG provide a definition, specific extraction rules and several examples. Examples only include the annotations that are relevant for the kind of entity that is being explained. The following color reference is used:

* Green: Correct extraction.
* Grey: Incorrect extraction.

Every mention of a relevant entity must be extracted, even if it is repeated. Extractions should include as few words as possible resulting more granular outcomes.

Punctuation marks should not be extracted unless stated otherwise.

Extractions should neither start nor finish with a blank space.

## **SUICIDE\_BEHAVIOR**

**Definition:** Suicidal behavior is any action that could cause a person to die, such as taking a drug overdose, crashing a car on purpose or harming body parts such as shooting, burning, cutting.

**Extraction rules:** Extract only the words directly related to behavior. Any action related to suicide should be extracted as behavior. Do not extract thoughts and ideas under this label.

**Examples:**

1. A girl I loved commit suicide, now this is my turn and I cut my wrists like her and kill myself.
2. I am thinking of taking my life as the problem persist and finally end it.
3. I failed. What now? - I tried to kill myself via partial suspension hanging and all I got was a headache.
4. I don't deserve to be alive - i hate myself so much, it hurts to exist.
5. I harm myself by overdosing my medicine fairly often and it does little to quell my disgust in myself.

## **PAST\_TRAUMA**

**Definition:** Trauma is an emotional response to a terrible event like a physiological or physical violence (domestic, school, work), natural disaster, sexual abuse etc. Immediately after the event, shock and denial are typical. Longer term reactions include unpredictable emotions, flashbacks, strained relationships, physical symptoms and even suicidal behaviors.

**Extraction rules:**

Terms include bullying, domestic violence, childhood traumas, sexual assault and/or abuse, humiliating at home/school/work, among friends, sudden or violent loss of a loved one, terrorism and refugee or war experiences should be extracted as past trauma.

**Examples:**

1. I've faced a lot of domestic trauma in my life.
2. My parents were heavily abused during their childhoods.
3. Right after a bad exam, I just want a car to hit me and to die or be in a coma.
4. I presume dad humiliated me, but i don't exactly remember.
5. My mom said I should look in the mirror to see how ugly I looked when I was young.

## **SUICIDE\_PSYCHACHE**

**Definition:** Psychache is a negative introspective experience, which is positively associated with the risk of suicide. A suicide psychache is simply anguish, soreness and aching, finally resulting in mental and/or psychological pain.

**Extraction rules:** The extracted words should include intense psychological pain and/or thoughts related to suicide tendency. Psychache can readily become “unbearable” or “intolerable,” and in turn motivate suicide. Saddness, unhappiness, low spirits should etc. be considered as physiological emotions and should not be extracted as psychache. Also extract mental disorders that can be related to suicide.

**Examples:**

1. I think I'll be depressed for my entire life someday.
2. The depressive painful thoughts or whatever, don't ever go away, no matter if i change my work, have money or don’t, with or without romantic partners, or how my social life is doing.
3. Today, I messed up everything and am so fucking unhappy.
4. I am suicidal every day and I have it for a very long time. This is due to my bipolar disorder.
5. I should just do everyone a favor and kill myself. Everyone would be much better off without a piece of shit like me around, spreading my suicidal ideation to everyone.
6. Doctors diagnosed me with schizophrenia when I was 23 years old.