### **FNDeepML Annotation Guidelines**

#### Version 1.1

Alba Bonet-Jover, Estela Saquete, Patricio Martínez-Barco, Miguel Ángel García-Cumbreras

FNDeepML (Fake News Deep Markup Language) is a fine-grained annotation scheme aimed at taking the fake news detection task a step further, which provides two levels of news annotation:

- 1. **Structure**: divides a news piece into different parts based on applying the inverted pyramid hypothesis, which provides each part with a different level of relevance.
- 2. **Content**: the content elements are annotated by following the 5W1H technique, a method used in journalism for answering the six key questions in a news story.

#### **TABLE OF CONTENTS:**

- 1. Introduction
- 2. FNDeepML level tags
  - 2.1. Structure level
    - 2.1.1. <HEADLINE>
    - 2.1.2. <SUBTITLE>
    - 2.1.3. <LEAD>
    - 2.1.4. <BODY>
    - 2.1.5. <CONCLUSION>
    - 2.1.6. <QUOTE>
  - 2.2. Content level
    - 2.2.1. <WHO>
    - 2.2.2. <WHAT>
    - 2.2.3. <WHEN>
    - 2.2.4. <WHERE>
    - 2.2.5. <WHY>
    - 2.2.6. <HOW>
- 3. FNDeepML attributes tags
  - 3.1. type
  - 3.2. id
  - 3.3. not relevant
  - 3.4. author\_stance
- 4. FNDeepML metadata tags
  - 4.1. <DOMAIN>
  - 4.2. <SOURCE>
  - 4.3. <DATE>
  - 4.4. <AUTHOR>
- 5. FNDeepML multimedia tags
  - 5.1. <IMG>

- 5.2. < VIDEO >
- 5.3. <URL>
- 5.4. <TABLE>
- 5.5. < GRAPH>

## 1. Introduction

Several factors and elements are involved in the creation of fake news. Fake news is news disguised as truth with the aim of disinforming to obtain a benefit, either economic, political or ideological. Why do we say that they are disguised as true? Because normally they are not totally false, but they tend to mix true and false elements to distort true information, thereby distorting reality.

Due to this technique of mixing true and false information, fake news detection has become an arduous task. FNDeepML was created specifically for the purpose of separately detecting the parts and elements where false information is more likely to appear. This approach enhances the fight against disinformation and enables their later automatic detection.

A detailed description of the two levels proposed for annotating news and the respective tags used in each level will be proposed in Section 2. Each tag has a set of attributes, some mandatory and some optional, that are indicated with [] and the specific definition of each attribute is provided in detail in Section 3. Metadata and multimedia tags providing extralinguistic information about the news piece will be detailed in Section 4 and 5.

## 2. FNDeepML level tags

As presented in the Introduction, the annotation scheme architecture comprises two levels: the structure level and the content level. Tags are defined according to these levels and they are presented below.

#### 2.1. Structure level

The way a news piece is written varies according to the author's background, subject, style, source, etc. However, there are two characteristics that well-written news stories share: neutrality and the inverted pyramid structure (Thomson et al., 2008). In the inverted pyramid hypothesis, a news piece is divided into parts and each part contains information with different levels of relevance. The most relevant information is placed at the top of the news piece and the remaining information follows in order of relevance, ending with the least important information at the end (Zhang and Liu, 2016). Structure tags are described in order of relevance below.

#### 2.1.1. < HEADLINE>

This element is the title of the news article and it provides the main idea of the story. Normally in one sentence, it summarises the basic and essential information about the story and the idea

around which the news piece has been created. The main objective of the HEADLINE is to attract the reader's attention.

```
attributes ::= id type
id ::= ID
type ::= 'T' | 'F' | 'U'
```

#### **Examples**

#### **ENGLISH:**

## <HEADLINE id=1 type='T'>A glass of hot water with lemon can save your life</HEADLINE>

The lemon, besides being an ideal component for our meals, can save our lives since it prevents and cures cancer.

The lemon has several properties, but surely you did not know that medical experts have used it for millions of years to cure cancer, as drinking a glass of hot water every day with slices of this citrus fruit kills cancer cells in our body and creates a protective shield that prevents future tumours.

There are many studies that have shown over the years that lemon has miraculous properties for our health. It has been shown that it is up to 100 times more effective than chemotherapy. However, we must know how to prepare it so that this citrus fruit has the desired effects on our body. First of all, you should use hot water with lemon slices and take it every day first thing on an empty stomach [...]

To sum up, lemon is an anti-cancer food that can save your life thanks to its anti-cancer properties. Infusing a slice of lemon in a glass of hot water will help you to prevent and kill this dreadful disease, so do not hesitate to spread this news to everybody.

#### SPANISH:

# <HEADLINE id=1 type='T'>Un vaso de agua caliente con limón puede salvarte la vida

El limón, además de ser un componente ideal para nuestras comidas, puede salvarnos la vida, ya que previene y cura el cáncer.

Son muchas las propiedades que tiene el limón, pero seguro que no sabías que desde hacía millones de años expertos médicos lo han utilizado para curar el cáncer, pues tomar un vaso de agua caliente con trozos de este cítrico todos los días mata las células cancerígenas de nuestro cuerpo y crea un escudo protector que previene futuros tumores.

Existen muchos estudios que a lo largo de los años han demostrado que el limón tiene propiedades milagrosas para nuestra salud. Se ha llegado a demostrar que hasta es 100 veces más efectivo que la quimioterapia. No obstante, hay que saber cómo prepararlo para que este cítrico tenga los efectos deseados en nuestro cuerpo. En primer lugar, se debe utilizar agua caliente con trocitos de limón y tomarlo en ayunas todos los días [...]

En resumen, el limón es un alimento anticáncer que puede salvar tu vida gracias a sus propiedades anticancerígenas. Tomar una infusión de agua caliente con una rodaja de limón te ayudará a prevenir y matar esta dura enfermedad, así que no dudes en difundir esta noticia a todo el mundo.

#### 2.1.2. <SUBTITLE>

A SUBTITLE is the second title that explains the HEADLINE in more detail. It completes the information by presenting the idea in a very summarised way or can provide additional information not mentioned in the HEADLINE. The SUBTITLE'S function is to keep the reader's attention and encourage him/her to read the whole news article.

```
attributes ::= id type
id ::= ID
type ::= 'T' | 'F' | 'U'
```

#### **Examples**

**ENGLISH:** 

A glass of hot water with lemon can save your life

<SUBTITLE id=1 type='T'>The lemon, besides being an ideal component for our meals, can save our lives since it prevents and cures cancer. </SUBTITLE>

The lemon has several properties, but surely you did not know that medical experts have used it for millions of years to cure cancer, as drinking a glass of hot water every day with slices of this citrus fruit kills cancer cells in our body and creates a protective shield that prevents future tumours.

There are many studies that have shown over the years that lemon has miraculous properties for our health. It has been shown that it is up to 100 times more effective than chemotherapy. However, we must know how to prepare it so that this citrus fruit has the desired effects on our body. First of all, you should use hot water with lemon slices and take it every day first thing on an empty stomach [...]

To sum up, lemon is an anti-cancer food that can save your life thanks to its anti-cancer properties. Infusing a slice of lemon in a glass of hot water will help you to prevent and kill this dreadful disease, so do not hesitate to spread this news to everybody.

## SPANISH:

Un vaso de agua caliente con limón puede salvarte la vida

<SUBTITLE id=1 type='T'>El limón, además de ser un componente ideal para nuestras comidas, puede salvarnos la vida, ya que previene y cura el cáncer.</SUBTITLE>

Son muchas las propiedades que tiene el limón, pero seguro que no sabías que desde hacía millones de años expertos médicos lo han utilizado para curar el cáncer, pues tomar un vaso de agua caliente con trozos de este cítrico todos los días mata las células cancerígenas de nuestro cuerpo y crea un escudo protector que previene futuros tumores.

Existen muchos estudios que a lo largo de los años han demostrado que el limón tiene propiedades milagrosas para nuestra salud. Se ha llegado a demostrar que hasta es 100 veces más efectivo que la quimioterapia. No obstante, hay que saber cómo prepararlo para que este cítrico tenga los efectos deseados en nuestro cuerpo. En primer lugar, se debe utilizar agua caliente con trocitos de limón y tomarlo en ayunas todos los días [...]

En resumen, el limón es un alimento anticáncer que puede salvar tu vida gracias a sus propiedades anticancerígenas. Tomar una infusión de agua caliente con una rodaja de limón te ayudará a prevenir y matar esta dura enfermedad, así que no dudes en difundir esta noticia a todo el mundo.

#### 2.1.3. <LEAD>

It is the paragraph(s) that develops the main information by following the 5W1H method and "presents the point or newsworthy element(s) of the story and simultaneously works as a beginning of the story" (Bednarek and Caple, 2012). The main information of the news article must be clearly presented in this section by answering the six questions used in journalism: WHAT, WHO, WHERE, WHEN, WHY and HOW. The LEAD and the HEADLINE are sometimes considered as a unit because the LEAD usually repeats the idea revealed by the HEADLINE, but in more detail (Thomson et al., 2008).

```
attributes ::= id type
id ::= ID
type ::= 'T' | 'F' | 'U'
```

## **Examples**

**ENGLISH:** 

A glass of hot water with lemon can save your life

The lemon, besides being an ideal component for our meals, can save our lives since it prevents and cures cancer.

<LEAD id=1 type='F'>The lemon has several properties, but surely you did not know that medical experts have used it for millions of years to cure cancer, as drinking a glass of hot water every day with slices of this citrus fruit kills cancer cells in our body and creates a protective shield that prevents future tumours.

There are many studies that have shown over the years that lemon has miraculous properties for our health. It has been shown that it is up to 100 times more effective than chemotherapy. However, we must know how to prepare it so that this citrus fruit has the desired effects on our body. First of all, you should use hot water with lemon slices and take it every day first thing on an empty stomach [...]

To sum up, lemon is an anti-cancer food that can save your life thanks to its anti-cancer properties. Infusing a slice of lemon in a glass of hot water will help you to prevent and kill this dreadful disease, so do not hesitate to spread this news to everybody.

#### SPANISH:

Un vaso de agua caliente con limón puede salvarte la vida

El limón, además de ser un componente ideal para nuestras comidas, puede salvarnos la vida, ya que previene y cura el cáncer.

<LEAD id=1 type='f'>Son muchas las propiedades que tiene el limón, pero seguro que no sabías que desde hacía millones de años expertos médicos lo han utilizado para curar el cáncer, pues tomar un vaso de agua caliente con trozos de este cítrico todos los días mata las células cancerígenas de nuestro cuerpo y crea un escudo protector que previene futuros tumores.

Existen muchos estudios que a lo largo de los años han demostrado que el limón tiene propiedades milagrosas para nuestra salud. Se ha llegado a demostrar que hasta es 100 veces más efectivo que la quimioterapia. No obstante, hay que saber cómo prepararlo para que este cítrico tenga los efectos deseados en nuestro cuerpo. En primer lugar, se debe utilizar agua caliente con trocitos de limón y tomarlo en ayunas todos los días [...]

En resumen, el limón es un alimento anticáncer que puede salvar tu vida gracias a sus propiedades anticancerígenas. Tomar una infusión de agua caliente con una rodaja de limón te ayudará a prevenir y matar esta dura enfermedad, así que no dudes en difundir esta noticia a todo el mundo.

#### 2.1.4. <BODY>

The BODY contains all the information developed in the news article. The BODY presents all the background, facts, elements and reasons for the story in detail. As mentioned by Thomson, "the body of the text does not develop new meanings but, rather, acts to refer back to the headline/lead through a series of specifications" (Thomson et al., 2008). All six questions answered in the LEAD will be developed in the BODY by explaining all the elements that are involved in the news piece.

```
attributes ::= id type
id ::= ID
type ::= 'T' | 'F' | 'U'
```

#### **Examples**

#### **ENGLISH:**

A glass of hot water with lemon can save your life

The lemon, besides being an ideal component for our meals, can save our lives since it prevents and cures cancer.

The lemon has several properties, but surely you did not know that medical experts have used it for millions of years to cure cancer, as drinking a glass of hot water every day with slices of this citrus fruit kills cancer cells in our body and creates a protective shield that prevents future tumours.

<BODY id=1 type='f'>There are many studies that have shown over the years that the lemon has miraculous properties for our organism. It has been shown that it is up to 100 times more effective than chemotherapy. However, we must know HOW to prepare it so that this citrus fruit has the desired effects on our body. First of all, you should use hot water with lemon slices and take it fasting every day [...]</BODY>

To sum up, lemon is an anti-cancer food that can save your life thanks to its anti-cancer properties. Infusing a slice of lemon in a glass of hot water will help you to prevent and kill this dreadful disease, so do not hesitate to spread this news to everybody.

## SPANISH:

Un vaso de agua caliente con limón puede salvarte la vida

El limón, además de ser un componente ideal para nuestras comidas, puede salvarnos la vida, ya que previene y cura el cáncer.

Son muchas las propiedades que tiene el limón, pero seguro que no sabías que desde hacía millones de años expertos médicos lo han utilizado para curar el cáncer, pues tomar un vaso de agua caliente con trozos de este cítrico todos los días mata las células cancerígenas de nuestro cuerpo y crea un escudo protector que previene futuros tumores.

<BODY id=1 type='F'>Existen muchos estudios que a lo largo de los años han demostrado que el limón tiene propiedades milagrosas para nuestra salud. Se ha llegado a demostrar que hasta es 100 veces más efectivo que la quimioterapia. No obstante, hay que saber cómo prepararlo para que este cítrico tenga los efectos deseados en nuestro cuerpo. En primer lugar, se debe utilizar agua caliente con trocitos de limón y tomarlo en ayunas todos los días [...]</BODY>

En resumen, el limón es un alimento anticáncer que puede salvar tu vida gracias a sus propiedades anticancerígenas. Tomar una infusión de agua caliente con una rodaja de limón te ayudará a prevenir y matar esta dura enfermedad, así que no dudes en difundir esta noticia a todo el mundo.

#### 2.1.5. <CONCLUSION>

The main idea of the story can be summarised in a phrase or in a paragraph but, even if the CONCLUSION is considered part of a well-structured article, it does not always appear. It presents the least important information, as it is only a summary of all the important information that has been developed in the previous parts of the news story.

```
attributes ::= id type

id ::= ID

type ::= 'T' | 'F' | 'U'
```

#### ENGLISH:

A glass of hot water with lemon can save your life

The lemon, besides being an ideal component for our meals, can save our lives since it prevents and cures cancer.

The lemon has several properties, but surely you did not know that medical experts have used it for millions of years to cure cancer, as drinking a glass of hot water every day with slices of this citrus fruit kills cancer cells in our body and creates a protective shield that prevents future tumours.

There are many studies that have shown over the years that lemon has miraculous properties for our health. It has been shown that it is up to 100 times more effective than chemotherapy. However, we must know how to prepare it so that this citrus fruit has the desired effects on our body. First of all, you should use hot water with lemon slices and take it every day first thing on an empty stomach [...]

<CONCLUSION id=1 type='T'>To sum up, lemon is an anti-cancer food that can save your life thanks to its anti-cancer properties. Infusing a slice of lemon in a glass of hot water will help you to prevent and kill this dreadful disease, so do not hesitate to spread this news to everybody.

#### SPANISH:

Un vaso de agua caliente con limón puede salvarte la vida

El limón, además de ser un componente ideal para nuestras comidas, puede salvarnos la vida, ya que previene y cura el cáncer.

Son muchas las propiedades que tiene el limón, pero seguro que no sabías que desde hacía millones de años expertos médicos lo han utilizado para curar el cáncer, pues tomar un vaso de agua caliente con trozos de este cítrico todos los días mata las células cancerígenas de nuestro cuerpo y crea un escudo protector que previene futuros tumores.

Existen muchos estudios que a lo largo de los años han demostrado que el limón tiene propiedades milagrosas para nuestra salud. Se ha llegado a demostrar que hasta es 100 veces más efectivo que la quimioterapia. No obstante, hay que saber cómo prepararlo para que este cítrico tenga los efectos deseados en nuestro cuerpo. En primer lugar, se debe utilizar agua caliente con trocitos de limón y tomarlo en ayunas todos los días [...]

<CONCLUSION id=1 type='T'>En resumen, el limón es un alimento anticáncer que puede salvar tu vida gracias a sus propiedades anticancerígenas. Tomar una infusión de agua caliente con una rodaja de limón te ayudará a prevenir y matar esta dura enfermedad, así que no dudes en difundir esta noticia a todo el mundo.</P>

True news includes true and verified data about an issue, but also includes fact-checks that disclose false statements. Therefore, another tag called QUOTE has been used. This tag may appear embedded in the previous elements. It is used when an element or sentence textually quotes a message or reproduces an already reported idea. In the case of the QUOTE, there is no type attribute and besides the id attribute, there is a new attribute called author stance whose possible values are: 'D' (the author disagrees with the quote); 'A' (the author agrees with the quote); and 'U' (Unknown, if the author's stance is not clear). The attribute is explained in Section 3.4. in more detail.

```
attributes ::= id author_stance
id ::= ID
author_stance ::= 'D' | 'A' | 'U'
```

#### **Examples**

#### **ENGLISH:**

A false story has circulated on WhatsApp claiming that <QUOTE id=1 author\_stance='D'>a German doctor has been arrested for creating the coronavirus in a laboratory in Berlin.</QUOTE>

#### SPANISH:

Ha circulado una noticia falsa por WhatsApp que afirmaba que <QUOTE id=1 author\_stance='D'>un médico alemán había sido detenido por fabricar el coronavirus en un laboratorio de Berlín.</QUOTE>

#### 2.2. Content level

The second level focuses on the essential content elements of news. The approach followed in this level is based on the journalism technique known as 5W1H, which allows the detection of the key elements needed to accurately communicate a story. The 5W1H journalistic questions enables a description of the main event reported in a news article by answering the following six questions: WHO, WHAT, WHEN, WHERE, WHY and HOW. (Hamborg et al., 2019).

#### 2.2.1. <WHO>

In a sentence, the WHO represents the subject or entity involved or acting in an event. It may usually refer to people, organizations or even personified entities (such a country: e.g. *France discovers a vaccine...*)

```
attributes ::= id type [not_relevant]

id ::= ID

type ::= 'T' | 'F' | 'U'

not_relevant::= 'T' | 'F'
```

#### **ENGLISH:**

**<WHO id=1 type='T'>An Italian scientist</WHO>** was arrested by force yesterday in Milan for selling an unauthorised vaccine.

#### SPANISH:

<WHO id=1 type='T'>Un científico italiano</WHO> fue detenido mediante el uso de la fuerza ayer en Milán por vender una vacuna no autorizada.

#### 2.2.2. <WHAT>

The WHAT tag refers to the circumstances, events or facts of the action performed by the subject.

```
attributes ::= id type [not_relevant]

id ::= ID

type ::= 'T' | 'F' | 'U'

not_relevant::= 'T' | 'F'
```

## **Examples**

#### **ENGLISH:**

An Italian scientist **<WHAT id=1 type='T'>was arrested</WHAT>** by force yesterday in Milan for selling an unauthorised vaccine.

#### SPANISH:

Un científico italiano **<WHAT id=1 type='T'>fue detenido</WHAT>** mediante el uso de la fuerza ayer en Milán por vender una vacuna no autorizada.

#### 2.2.3. <WHEN>

The WHEN tag indicates the time or the moment when the events occurred. It is found in temporary expressions (e.g. on Wednesday, in 2010, last Friday...)

```
attributes ::= id type [not_relevant]

id ::= ID

type ::= 'T' | 'F' | 'U'

not_relevant::= 'T' | 'F'
```

#### **ENGLISH:**

An Italian scientist was arrested by force **<WHEN id=1 type='F'>yesterday</WHEN>** in Milan for selling an unauthorised vaccine.

#### SPANISH:

Un científico italiano fue detenido mediante el uso de la fuerza **<WHEN id=1 type='F'>ayer</WHEN>** en Milán por vender una vacuna no autorizada.

#### 2.2.4. <WHERE>

This tag designates the location where the events occurred. It is found in location expressions, either physical (e.g. *in France, in a laboratory*) or not (e.g. *in Facebook*).

```
attributes ::= id type [not_relevant]

id ::= ID

type ::= 'T' | 'F' | 'U'

not_relevant::= 'T' | 'F'
```

## **Examples**

#### **ENGLISH:**

An Italian scientist was arrested by force yesterday **<WHERE id=1 type='f'>in Milan</WHERE>** for selling an unauthorised vaccine.

#### SPANISH:

Un científico italiano fue detenido mediante el uso de la fuerza ayer **<WHERE id=1 type='F'>en Milán</WHERE>** por vender una vacuna no autorizada.

#### 2.2.5. <WHY>

This tag refers to the reason for or the cause of the event. The WHY tag is not always present in a news piece, as the cause may be implied or may not be known.

```
attributes ::= id type [not_relevant]

id ::= ID

type ::= 'T' | 'F' | 'U'

not_relevant::= 'T' | 'F'
```

#### **ENGLISH:**

An Italian scientist was arrested by force yesterday in Milan <WHY id=1 type='T'>for selling an unauthorised vaccine.</WHY>

#### SPANISH:

Un científico italiano fue detenido mediante el uso de la fuerza ayer en Milán <WHY id=1 type='T'>por vender una vacuna no autorizada.</WHY>

#### 2.2.6. <HOW>

This tag refers to the way events have developed, the manner or the method in which a given action has been carried out.

```
attributes ::= id type [not_relevant]
id ::= ID
type ::= 'T' | 'F' | 'U'
not_relevant::= 'T' | 'F'
```

## **Examples**

#### **ENGLISH:**

An Italian scientist was arrested <HOW id=1 type='T' not\_relevant='T'>by force</HOW> yesterday in Milan for selling an unauthorised vaccine.

#### SPANISH:

Un científico italiano fue detenido **<HOW id=1 type='T' not\_relevant='T'>mediante el uso de la fuerza</HOW>** ayer en Milán por vender una vacuna no autorizada.

#### 3. FNDeepML attributes tags

Every attribute used in the aforementioned tags is explained in detail below.

#### 3.1. type

This attribute determines the level of veracity, the value of truth or deception, in other words, it indicates if a sentence or a paragraph is true or false. These values will be indicated as follows:

'T' (true), 'F' (fake) or 'U' (unknown). In this way, fake parts and true parts can be detected in the same news piece.

#### **Examples**

- The attribute type='T' will design a true text:

ENGLISH: <HEADLINE **type='T'>**A glass of hot water with lemon can save your life</HEADLINE>

SPANISH: <HEADLINE **type='T'>**Un vaso de agua caliente con limón puede salvarte la vida</HEADLINE>

- The attribute type='F' will design a fake text:

ENGLISH: <HEADLINE **type='F'>**A glass of hot water with lemon can save your life</HEADLINE>

SPANISH: <HEADLINE **type='F'>**Un vaso de agua caliente con limón puede salvarte la vida</HEADLINE>

- The attribute type='U' will refer to a text whose veracity is unknown:

ENGLISH: <HEADLINE **type='U'**>A glass of hot water with lemon can save your life</HEADLINE>

SPANISH: <HEADLINE **type='U'**>Un vaso de agua caliente con limón puede salvarte la vida</HEADLINE>

## 3.2. id

Each tag of the scheme has a numerical *id*. Generally, the *id* of the different parts of the structure (headline, lead, etc.) will be 1 since there is only one element of this type. However, the *id* is used anyway because in some cases, articles with several subtitles have been detected.

#### **Examples**

#### **ENGLISH:**

<SUBTITLE type='F' id=1>A glass of hot water with lemon can save your life</SUBTITLE>

<SUBTITLE type='F' id=2>The lemon, besides being an ideal component for our meals, can save
our lives, since it prevents and cures cancer.</SUBTITLE>

#### SPANISH:

<SUBTITLE type='F' id=1>Un vaso de agua caliente con limón puede salvarte la vida</SUBTITLE>

<SUBTITLE type='F' id=2>El limón, además de ser un componente ideal para nuestras comidas, puede salvarnos la vida, ya que previene y cura el cáncer.

#### 3.3. not relevant

This attribute helps to identify non-relevant information, that is, information that does not add anything to the article and therefore does not help to identify whether the news is true or false. The value 'T' indicates that there is non-relevant information. Alternatively, the value is 'F', or the attribute is omitted. This attribute is only used in the content tags (5W1H).

### **Examples**

**ENGLISH:** 

<WHAT type='U' not\_relevant='T' id=1>non-relevant information</WHAT>

SPANISH:

<WHAT type='U' not\_relevant='T' id=1>información no relevante</WHAT>

#### 3.4. author stance

This is an attribute within the QUOTE tag indicating the author's stance on the content that is being quoted. It will be used mainly to highlight false quotations in true news. Therefore, the attributes of the tag QUOTE could be as follows:

- A: if the author agrees with the mentioned quotation, it will be indicated by the attribute value A (Agree).
- D: if the author does not agree with what it is said, it will be indicated by the attribute value D (Disagree).
- U: if the author's stance is not clear, it will be indicated by the attribute value U (Unknown).

## **Examples**

#### **ENGLISH:**

A false story has circulated on WhatsApp claiming that <QUOTE author\_stance='D' id=1>a German doctor has been arrested for creating the coronavirus in a laboratory in Berlin.</QUOTE>

#### SPANISH:

Ha circulado una noticia falsa por WhatsApp que afirmaba que <QUOTE author\_stance='D' id=1>un médico alemán había sido detenido por fabricar el coronavirus en un laboratorio de Berlín.</QUOTE>

## 4. FNDeepML metadata tags

There are some elements that provide information about the creation of news, such as the domain, the source, the date or the author.

4.1. <domain></domain>
<u>Examples</u>
ENGLISH:
<domain>Health</domain>
SPANISH:
<domain>Salud</domain>
4.2. <source/>
<u>Examples</u>
ENGLISH:
<source url="https://www.elmundo.es/"/> El Mundo
SPANISH:
<source url="https://www.elmundo.es/"/> El Mundo
4.3. <date></date>
<u>Examples</u>
ENGLISH:
<b><date value="&lt;/b&gt;2020-01-08T16:20&lt;b&gt;"></date></b> Monday, 8 January 2020 - 16:20 <b></b>
SPANISH:
<pre><date value="2020-01-08T16:20">Lunes, 8 de enero de 2020 - 16:20</date></pre>
Note: the attribute 'value' presents the dates according to the international standard format ISO 8601. It is only used in the DATE tag.

## 4.4 <AUTHOR>

**Examples** 

ENGLISH:
<author>Marta Rico</author>
SPANISH:
<author>Marta Rico</author>
5. FNDeepML multimedia tags
Finally, multimedia elements of news such as images, videos, tables, or graphs are also annotated.
<u>5.1. <img/></u>
<u>Examples</u>
ENGLISH:
<img scr="link"/> caption
SPANISH:
<img scr="enlace"/> leyenda
Note: the attribute 'scr' specifies the path to the image.
5.2. <video></video>
<u>Examples</u>
ENGLISH:
<video scr="link">caption</video>
SPANISH:
<video scr="enlace">leyenda</video>
E 2. (UDI)
5.3. <url></url>
<u>Examples</u>
ENGLISH:
<url scr="link">link</url>

SPANISH:
<url scr="enlace">enlace</url>
5.4. <table></table>
<u>Examples</u>
ENGLISH:
<table>caption</table>
SPANISH:
<table>leyenda</table>
5.5. <graph></graph>
<u>Examples</u>
ENGLISH:
<graph>caption</graph>
CDANICH
SPANISH:
CDADUS layanda (CDADUS
<graph>leyenda</graph>
CGRAPH>leyenuaCyGraPh>

## **REFERENCES**

Bednarek, M., & Caple, H. (2012). News discourse (Vol. 46). A&C Black.

Hamborg, F., Breitinger, C., & Gipp, B. (2019). Giveme5W1H: A Universal System for Extracting Main Events from News Articles. arXiv preprint arXiv:1909.02766.

Thomson, E. A., White, P. R., & Kitley, P. (2008). "Objectivity" and "hard news" reporting across cultures: Comparing the news report in English, French, Japanese and Indonesian journalism. *Journalism studies*, *9*(2), 212-228. <a href="https://doi.org/10.1080/14616700701848261">https://doi.org/10.1080/14616700701848261</a>

Zhang, H. y H. Liu. 2016. Visualizing structural "inverted pyramids" in English news discourse across levels. Text & Talk, 36(1):89-110. <a href="https://doi.org/10.1515/text-2016-0005">https://doi.org/10.1515/text-2016-0005</a>

## <u>Acknowledgements</u>

FNDeepML was born in the context of the research work partially funded by Generalitat Valenciana through project "SIIA: Tecnologías del lenguaje humano para una Sociedad inclusiva,

igualitaria, y accesible" with grant reference PROMETEU/2018/089, by the Spanish Government through project RTI2018-094653-B-C22: "Modelang: Modeling the behavior of digital entities by Human Language Technologies", as well as being partially supported by a grant from the Fondo Europeo de Desarrollo Regional (FEDER) and the LIVING-LANG project (RTI2018-094653-B-C21) from the Spanish Government.