

Insight Type	Value	Attributes
Sentiment	<p>Positive, abbreviated as 'p' in XML Negative, abbreviated as 'n' in XML</p> <p>By default, it's neutral, when no sentiment is extracted.</p>	<p><i>topic</i>, the subject being talked, i.e. “iPhone” <i>emotion</i>, subjective comment, i.e. “awesome” <i>procon</i>, objective comment, i.e. “efficient” <i>agent</i>, the speaker making comment, i.e. “i”</p> <p>Required: ‘emotion’ or ‘procon’ Optional: others</p>
Behavior	<p>Active, abbreviated as 'p' in XML. Typical examples: * <i>I bought an iPhone.</i> * <i>I often shop at Walmart.</i></p> <p>Passive, abbreviated as 'n' in XML Typical examples. * <i>I am reluctant to buy an iPhone</i> * <i>I got rid of my iPhone.</i></p> <p>We might change 'p' and 'n' here to make it not confusing with the sentiment abbreviation.</p>	<p><i>topic</i>, same as above <i>action</i>, the verb expressing the action, i.e. “shop” <i>agent</i>, same as above</p> <p>Required: ‘action’ Optional: others</p>
Intent	<p>Need, abbreviated as 'n' in XML Typical examples: * <i>I need an iPhone to connect with friends.</i> * <i>I want to buy an iPhone</i></p> <p>Wsh, abbreviated as 'w' in XML Typical examples: * I wish iPhone has a longer battery life * It would be a lot better for me if iPhone's price is lower.</p>	<p><i>action</i>, same as above, i.e. 'need' <i>topic</i>, same as above, i.e. 'iPhone' <i>agent</i>, same as above, i.e. 'I' <i>content</i>, what do you wish for? i.e. “longer better life”, “lower price”</p> <p>Required: ‘action’ or ‘content’ Optional: others</p>
Named Entities (NE)	<p>Company, abbreviated as 'com' Product, abbreviated as 'prod' * SubProduct, abbreviated as <i>sprod</i> Location, abbreviated as 'loc' Person, abbreviated as 'per' Other, abbreviated as 'oth'</p>	<p><i>topic</i>, the string of the NE, i.e. “Apple” <i>topic</i>, the string of the NE, i.e. “iPhone” <i>topic</i>, the string of the NE, i.e. “iPhone 7” <i>topic</i>, the string of the NE, i.e. “Beijing” <i>topic</i>, the string of the NE, i.e. “Richard Liu” <i>topic</i>, the string of the NE, i.e. “New York Times”</p> <p>Required: ‘topic’ Optional: None</p>
<p>Note:</p> <p>The “RuleName” attribute in the XML output is for developmental debugging purpose, and thus please ignore.</p>		

Metadata in the XML:

Metadata information is encoded in the <Metadata></Metadata> tag, which currently contains several fields:

- **PublicationTime**, the document's publication time, **optional**
- **URL**, the document's URL, **optional**
- **Source**, the data provider or the place where data is originally collected from. **optional**.
"Source" currently has 3 possible values, "Twitter", "Socialgist" and "Amazon", which will be expanded to other data sources including "Facebook", "Instagram", etc. depending on our progress of data collection.
- **Sentiment**, the overall sentiment of the document, as opposed to topic or sentence level sentiment. It has three possible values, **Positive, Negative and Neutral**.

For Amazon data, additional metadata are extracted, including:

- **Title**: the product name commented in the review
- **Brand**: the company name selling the product. This one is optional.
- **Rating**: the rating score assigned by the reviewer, from 1-5
- **Reviewer**: The person who writes the review.

Metadata tag's content will be expanded as more metadata is collected from the data source.

One Example of Socialgist data:

```
<Case id="0">
```

```
  <Input>I have a mini Marche in Navy. It's a very pretty bag and very lady-like. Lightweight too! There's no Nina Ricci where I live, so I had to look through many online pictures of the bag to determine the size that would be suitable for me. So yes, I bought the bag without being able to see it in person. Below is a picture of the bag. The sides are permanently unclasped so that I can squeeze a bit more space out of the bag. Mini is really mini! Using it as an everyday bag should not be an issue. I have carried the bag to work as well. Unless you are really rough with bags? Attached Images Capture. JPG( 87. 0 KB, 14 views)</Input>
```

```
  <Tokenized>I_have_a_mini_Marche_in_Navy_. It_'s_a_very_pretty_bag_and_very_lady-like_. Lightweight_too! There_'s_no_Nina Ricci_where_I_live_,_so_I_had_to_look_through_many_online_pictures_of_the_bag_to_determine_the_size_that_would_be_suitable_for_me_. So_yes_,_I_bought_the_bag_without_being_able_to_see_it_in_person_. Below_is_a_picture_of_the_bag_. The_sides_are_permanently_unclasped_so_that_I_can_squeeze_a_bit_more_space_out_of_the_bag_. Mini_is_really_mini! Using_it_as_an_everyday_bag_should_not_be_an_issue_. I_have_carried_the_bag_to_work_as_well_. Unless_you_are_really_rough_with_bags? Attached_Images_Capture_.JPG(_87_.0_KB_,_14_views_)</Tokenized>
```

```
  <Metadata>
    <PublicationTime value="2016-06-11T03:58:00.000-07:00" />
    <URL value="http://forum.purseblog.com/handbags-and-purses/nina-ricci-marche-anyone-943830.html#post30324575" />
    <Source value="Socialgist" />
    <Sentiment>positive</Sentiment>
  </Metadata>
  <Output sentiment="p">
    <rulename rulename="hasEmotionP" />
    <mention topic="bag" />
    <mention emotion="pretty" />
  </Output>
</Case>
```

```

</Output>
<Output behavior="n">
  <rulename rulename="hasActionC" />
  <mention topic="bag" />
  <mention action="use" />
</Output>
<Output intent="w">
  <rulename rulename="shouldDo" />
  <mention content="should" />
  <mention topic="bag" />
</Output>
<Output sentiment="p">
  <rulename rulename="hasEmotionP" />
  <mention procon="size" />
  <mention topic="Nina Ricci" />
  <mention topic="bag" />
  <mention procon="suitable" />
</Output>
<Output ne="com">
  <rulename rulename="comOnly" />
  <mention topic="Nina Ricci" />
</Output>
<Output intent="w">
  <rulename rulename="wouldBetter" />
  <mention content="suitable" />
  <mention agent="me" />
  <mention topic="Nina Ricci" />
  <mention topic="bag" />
</Output>
<Output sentiment="p">
  <rulename rulename="hasEmotionP" />
  <mention topic="carried" />
  <mention topic="bag" />
  <mention procon="work" />
</Output>
<Output ne="prod">
  <rulename rulename="prodOnly" />
  <mention topic="carried" />
</Output>
<Output behavior="p">
  <rulename rulename="hasActionC" />
  <mention action="buy" />
  <mention agent="i" />
  <mention topic="bag" />
</Output>
<Output sentiment="p">
  <rulename rulename="hasEmotionP" />
  <mention procon="lightweight" />
</Output>
</Case>

```

One example of Amazon review output:

```

<Case id="0">
  <Input>Perfect red tutu for the price. I bought it as part of my daughters Halloween
  costume and it looked great on her.</Input>

```

```
<Tokenized>Perfect_red_tutu_for_the_price_.
I_bought_it_as_part_of_my_daughters_Halloween_costume_and_it_looked_great_on_her_.</Tokeni
zed>
<Metadata>
  <PublicationTime value="2013-11-03T16:00:00.000-08:00" />
  <URL value="https://www.amazon.com/dp/0000031887" />
  <Source value="Amazon" />
  <Title>Ballet Dress-Up Fairy Tutu</Title>
  <Brand>Boutique Cutie</Brand>
  <Reviewer>abigail</Reviewer>
  <Rating>5</Rating>
  <Sentiment>positive</Sentiment>
</Metadata>
<Output sentiment="p">
  <rulename rulename="hasEmotionP" />
  <mention procon="price" />
  <mention topic="tutu" />
  <mention emotion="perfect" />
</Output>
<Output sentiment="p">
  <rulename rulename="hasEmotionP" />
  <mention procon="look" />
  <mention topic="costume" />
  <mention emotion="great" />
  <mention procon="halloween" />
</Output>
<Output behavior="p">
  <rulename rulename="hasActionC" />
  <mention action="buy" />
  <mention topic="costume" />
  <mention agent="i" />
</Output>
</Case>
```