



Ontology Pitfall Scanner!

OOPS! (Ontology Pitfall Scanner!) helps you to detect some of the most common pitfalls appearing when developing ontologies.

To try it, enter a URI or paste an OWL document into the text field above. A list of pitfalls and the elements of your ontology where they appear will be displayed.

Scanner by URI:

Scanner by URI

Example: http://oops.linkeddata.es/example/swc_2009-05-09.rdf

Scanner by direct input:

```
<!-- http://www.crop-doa.com/assignment#hasAffected -->

<owl:ObjectProperty rdf:about="http://www.crop-
do.com/assignment#hasAffected">
  <rdfs:subPropertyOf
rdf:resource="http://www.w3.org/2002/07/owl#topObjectProperty"/>
  <owl:inverseOf rdf:resource="http://www.crop-
do.com/assignment#isAffectedBy"/>
  <rdfs:domain rdf:resource="http://www.crop-
do.com/assignment#Disease"/>
```

Scanner by RDF

☐ Uncheck this checkbox if you don't want us to keep a copy of your ontology.

[Go to advanced evaluation](#)

Evaluation results

It is obvious that not all the pitfalls are equally important; their impact in the ontology will depend on multiple factors. For this reason, each pitfall has an importance level attached indicating how important it is. We have identified three levels:

- **Critical** 🚫 : It is crucial to correct the pitfall. Otherwise, it could affect the ontology consistency, reasoning, applicability, etc.
- **Important** ⚠️ : Though not critical for ontology function, it is important to correct this type of pitfall.
- **Minor** 🟡 : It is not really a problem, but by correcting it we will make the ontology nicer.

[\[Expand All\]](#) | [\[Collapse All\]](#)

Results for P08: Missing annotations.

44 cases | Minor 🟡

This pitfall consists in creating an ontology element and failing to provide human readable annotations attached to it. Consequently, ontology elements lack annotation properties that label them (e.g. `rdfs:label`, `lemon:LexicalEntry`, `skos:prefLabel` or `skos:altLabel`) or that define them (e.g. `rdfs:comment` or `dc:description`). This pitfall is related to the guidelines provided in [5].

- The following elements have no `rdfs:label` defined:
 - > <http://www.crop-doa.com/assignment#Variety>
 - > <http://www.crop-doa.com/assignment#EnvironmentalFactors>
 - > <http://www.crop-doa.com/assignment#Soil>

Want to help?

- [Suggest new pitfalls](#)
- [Provide feedback](#)

Documentation:

- [Pitfall catalogue](#)
- [User guide](#)
- [Technical report](#)

Related papers:

- [IJSWIS 2014](#)
- [EKAW 2012](#)
- [ESWC 2012 Demo](#)

- > <http://www.crop-doa.com/assignment#NonChemicalMethod>
- > <http://www.crop-doa.com/assignment#Season>
- > <http://www.crop-doa.com/assignment#Climate>
- > <http://www.crop-doa.com/assignment#ControlMethod>
- > <http://www.crop-doa.com/assignment#Fungi>
- > <http://www.crop-doa.com/assignment#Bacteria>
- > <http://www.crop-doa.com/assignment#Disease>
- > <http://www.crop-doa.com/assignment#Nematode>
- > <http://www.crop-doa.com/assignment#Virus>
- > <http://www.crop-doa.com/assignment#ChemicalMethod>
- > <http://www.crop-doa.com/assignment#Crop>
- > <http://www.crop-doa.com/assignment#Water>
- > <http://www.crop-doa.com/assignment#Symptom>
- > <http://www.crop-doa.com/assignment#Location>
- > <http://www.crop-doa.com/assignment#isCultivatedIn>
- > <http://www.crop-doa.com/assignment#hasCultivatedSeason>
- > <http://www.crop-doa.com/assignment#isSymptomOf>
- > <http://www.crop-doa.com/assignment#isAffectedBy>
- > <http://www.crop-doa.com/assignment#hasVariety>
- > <http://www.crop-doa.com/assignment#hasEnvironmentalFactors>
- > <http://www.crop-doa.com/assignment#hasSymptom>
- > <http://www.crop-doa.com/assignment#isControlledBy>
- > <http://www.crop-doa.com/assignment#isEnvironmentalFactorOf>
- > <http://www.crop-doa.com/assignment#hasControl>
- > <http://www.crop-doa.com/assignment#isVarietyOf>
- > <http://www.crop-doa.com/assignment#hasAffected>
- > <http://www.crop-doa.com/assignment#hasDayTimeTemp>
- > <http://www.crop-doa.com/assignment#hasLocationName>
- > <http://www.crop-doa.com/assignment#hasSeasonName>
- > <http://www.crop-doa.com/assignment#imgSource>
- > <http://www.crop-doa.com/assignment#hasSymptomDesc>
- > <http://www.crop-doa.com/assignment#hasQuantity>
- > <http://www.crop-doa.com/assignment#hasColor>
- > <http://www.crop-doa.com/assignment#hasCropName>
- > <http://www.crop-doa.com/assignment#hasControlMethod>
- > <http://www.crop-doa.com/assignment#hasPHValue>
- > <http://www.crop-doa.com/assignment#hasVarietyName>
- > <http://www.crop-doa.com/assignment#hasScientificName>
- > <http://www.crop-doa.com/assignment#hasNightTimeTemp>
- > <http://www.crop-doa.com/assignment#hasShape>
- > <http://www.crop-doa.com/assignment#hasDiseaseName>

- [Ontoqual 2010](#)
- [CAEPIA 2009](#)

Web services:

- [REST Web Service](#)

Developed by:



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Results for P13: Inverse relationships not explicitly declared.**2 cases | Minor** 🟡

This pitfall appears when any relationship (except for those that are defined as symmetric properties using owl:SymmetricProperty) does not have an inverse relationship (owl:inverseOf) defined within the ontology.

- This pitfall appears in the following elements:
 - > <http://www.crop-doa.com/assignment#isCultivatedIn>
 - > <http://www.crop-doa.com/assignment#hasCultivatedSeason>

Results for P41: No license declared.**ontology* | Important** 🟠

The ontology metadata omits information about the license that applies to the ontology.

*This pitfall applies to the ontology in general instead of specific elements.

According to the highest importance level of pitfall found in your ontology the conformace badge suggested is "Important pitfalls" (see below). You can use the following HTML code to insert the badge within your ontology documentation:



```
<p>
<a href="http://oops.linkeddata.es"></a>
</p>
```

References:

- [1] Aguado-De Cea, G., Montiel-Ponsoda, E., Poveda-Villalón, M., and Giraldo-Pasmin, O.X. (2015). Lexicalizing Ontologies: The issues behind the labels. In Multimodal communication in the 21st century: Professional and academic challenges. 33rd Conference of the Spanish Association of Applied Linguistics (AESLA), XXXIII AESLA.
- [2] Noy, N. F., McGuinness, D. L., et al. (2001). Ontology development 101: A guide to creating your first ontology.
- [3] Gómez-Pérez, A. (1999). Evaluation of Taxonomic Knowledge in Ontologies and Knowledge Bases. Proceedings of the Banff Knowledge Acquisition for Knowledge-Based Systems Workshop. Alberta, Canada.
- [4] Montiel-Ponsoda, E., Vila Suero, D., Villazón-Terrazas, B., Dunsire, G., Escolano Rodríguez, E., Gómez-Pérez, A. (2011). Style guidelines for naming and labeling ontologies in the multilingual web.
- [5] Vrandečić, D. (2010). Ontology Evaluation. PhD thesis.
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- [7] Rector, A., Drummond, N., Horridge, M., Rogers, J., Knublauch, H., Stevens, R., Wang, H., and Wroe, C. (2004). Owl pizzas: Practical experience of teaching owl-dl: Common errors & common patterns. In Engineering Knowledge in the Age of the Semantic Web, pages 63-81. Springer.
- [8] Hogan, A., Harth, A., Passant, A., Decker, S., and Polleres, A. (2010). Weaving the pedantic web. In Proceedings of the WWW2010 Workshop on Linked Data on the Web, LDOW 2010, Raleigh, USA, April 27, 2010.

- [9] Archer, P., Goedertier, S., and Loutas, N. (2012). D7. 1.3-study on persistent URIs, with identification of best practices and recommendations on the topic for the Mss and the EC. PwC EU Services.
- [10] Bernes-Lee Tim. (2006). "Linked Data - Design issues". <http://www.w3.org/DesignIssues/LinkedData.html>
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- [12] Vatan, B. (2012). Is your linked data vocabulary 5-star?. http://bvatan.blogspot.fr/2012/02/is-your-linked-data-vocabulary-5-star_9588.html

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BibTex:

```
@article{poveda2014oops,  
  title={{OOPS! (Ontology Pitfall Scanner!): An On-line Tool for Ontology Evaluation}},  
  author={Poveda-Villal{\`o}n, Mar{\`i}a and G{\`o}mez-P{\`e}rez, Asunci{\`o}n and Su{\`a}rez-Figueroa, Mari Carmen},  
  journal={International Journal on Semantic Web and Information Systems (IJSWIS)},  
  volume={10},  
  number={2},  
  pages={7--34},  
  year={2014},  
  publisher={IGI Global}  
}
```

Please, help us making OOPS! better. **Feedback** is more than welcome!

In addition, you can also **suggest new pitfalls** so that they can be detected in future evaluations.

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