

ogy as input has still not been developed.

Besides the different types of ontologies that can be supported, there are also different uses for ontology learning. The first three tasks in the following list (again, taken from Omelayenko) relate to ontology acquisition tasks in knowledge engineering, and the last three to ontology maintenance tasks:

- Ontology creation from scratch by the knowledge engineer. In this task machine learning assists the knowledge engineer by suggesting the most important relations in the field or checking and verifying the constructed knowledge bases.
- Ontology schema extraction from web documents. In this task machine learning systems take the data and metaknowledge (like a metaontology) as input and generate the ready-to-use ontology as output with the possible help of the knowledge engineer.
- Extraction of ontology instances populates given ontology schemas and extracts the instances of the ontology presented in the web documents. This task is similar to information extraction and page annotation, and can apply the techniques developed in these areas.
- Ontology integration and navigation deal with reconstructing and navigating in large and possibly machine-learned knowledge bases. For example, the task can be to change the propositional-level knowledge base of the machine learner into a first-order knowledge base.
- An ontology maintenance task is updating some parts of an ontology that are designed to be updated (like formatting tags that have to track the changes made in the page layout).
- Ontology enrichment (or ontology tuning) includes automated modification of minor relations into an existing ontology. This does not change major concepts and structures but makes an ontology more precise.