

we use different domains every year ranging from university ranking to movies and the Fortune 500.

Second, you will build an ontology expressed in OWL that describes the domain (for example, your faculty). The ontology does not have to cover the whole domain but should contain at least a few dozen classes. Pay special attention to the quality (breadth, depth) of the ontology, and aim to use as much of OWL's expressiveness as possible. There are a number of possible tools to use at this stage. Arguably the best current editor is Protégé,²⁸ but we have also had good experiences with TopBraid Composer.²⁹

If you are ambitious, you may even want to start your ontology development by using ontology extraction tools from text or experimenting with tools that allow you to import semistructured data sources, such as Excel sheets or tab-delimited files (see, for example, Excel2RDF, ConvertToRDF, Any23, or XLWrap). Of course, you may choose to start from some existing ontologies in this area.

Preferably, also use an inference engine to validate your ontology and to check it for inconsistencies. If you use Protégé, you may want to exploit some of the available plug-ins for this editor, such as multiple visualizations for your ontology or reasoning with Pellet or HermiT.

Third, populate your ontology with concrete instances and their properties. Depending on the choice of editing tool, this can either be done with the same tool (Protégé) or, given the simple syntactic structure of instances in RDF, you may even decide to write these by hand or to code some simple scripts to extract the instance information from available sources. For example, you can convert a relational database with the given data to RDF. Or you may want to write a scraper for some of the many websites that contain information on radio and television schedules, programs, genres, and celebrities. The BBC even offers a convenient application programming interface for querying their schedule directly.³⁰ You may want to use the syntax validation service

²⁸<http://protege.stanford.edu/>.

²⁹See http://topquadrant.com/products/TB_Composer.html.

³⁰See <http://www.bbc.co.uk/programmes/developers>.