# Resource Summary Report

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## Protege

RRID:SCR_003299
Type: Tool

### Proper Citation

Protege (RRID:SCR_003299)

### Resource Information

**URL:** http://protege.stanford.edu

**Proper Citation:** Protege (RRID:SCR_003299)

**Description:** Protege is a free, open-source platform that provides a growing user community with a suite of tools to construct domain models and knowledge-based applications with ontologies. At its core, Protege implements a rich set of knowledge-modeling structures and actions that support the creation, visualization, and manipulation of ontologies in various representation formats. Protege can be customized to provide domain-friendly support for creating knowledge models and entering data. Further, Protege can be extended by way of a plug-in architecture and a Java-based Application Programming Interface (API) for building knowledge-based tools and applications. An ontology describes the concepts and relationships that are important in a particular domain, providing a vocabulary for that domain as well as a computerized specification of the meaning of terms used in the vocabulary. Ontologies range from taxonomies and classifications, database schemas, to fully axiomatized theories. In recent years, ontologies have been adopted in many business and scientific communities as a way to share, reuse and process domain knowledge. Ontologies are now central to many applications such as scientific knowledge portals, information management and integration systems, electronic commerce, and semantic web services. The Protege platform supports two main ways of modeling ontologies: * The Protege-Frames editor enables users to build and populate ontologies that are frame-based, in accordance with the Open Knowledge Base Connectivity protocol (OKBC). In this model, an ontology consists of a set of classes organized in a subsumption hierarchy to represent a domain's salient concepts, a set of slots associated to classes to describe their properties and relationships, and a set of instances of those classes - individual exemplars of the concepts that hold specific values for their properties. * The Protege-OWL editor enables users to build ontologies for the Semantic Web, in particular in the W3C's Web Ontology Language (OWL). An OWL ontology may include descriptions of classes, properties and their instances. Given such an ontology, the OWL formal semantics

specifies how to derive its logical consequences, i.e. facts not literally present in the ontology, but entailed by the semantics. These entailments may be based on a single document or multiple distributed documents that have been combined using defined OWL mechanisms (see the OWL Web Ontology Language Guide). Protege is based on Java, is extensible, and provides a plug-and-play environment that makes it a flexible base for rapid prototyping and application development.

**Abbreviations:** Protege

**Synonyms:** Protégé, Protege Project

**Resource Type:** software resource, authoring tool, software application

**Defining Citation:** PMID:17687607

**Keywords:** ontology, java, develop, manage, edit, plug-in, FASEB list

**Funding:** Defense Advanced Research Projects Agency ;
eBay ;
NCI ;
NIST - National Institute of Standards and Technology ;
National Centers for Biomedical Computing ;
NSF ;
Neural ElectroMagnetic Ontologies NEMO ;
Pfizer ;
NLM LM007885

**Availability:** Open unspecified license; Mozilla license. We would be grateful if scientific publications resulting from projects that make use of Prot??g?? would include the following sentence in the acknowledgments section: This work was conducted using the Prot??g?? resource, Which is supported by grant LM007885 from the United States National Library of Medicine.

**Resource Name:** Protege

**Resource ID:** SCR_003299

**Alternate IDs:** nif-0000-31708

**Record Creation Time:** 20220129T080218+0000

**Record Last Update:** 20250423T060126+0000

## Ratings and Alerts

No rating or validation information has been found for Protege.

No alerts have been found for Protege.

## Data and Source Information

**Source:** SciCrunch Registry

## Usage and Citation Metrics

We found 139 mentions in open access literature.

**Listed below are recent publications.** The full list is available at FDI Lab - SciCrunch.org.


Shojaee-Mend H, et al. (2024) A fuzzy ontology-based case-based reasoning system for stomach dystemperament in Persian medicine. PloS one, 19(10), e0309722.

Beverley J, et al. (2024) Coordinating virus research: The Virus Infectious Disease Ontology. PloS one, 19(1), e0285093.

Yamagata Y, et al. (2024) Prototyping an Ontological Framework for Cellular Senescence Mechanisms: A Homeostasis Imbalance Perspective. Scientific data, 11(1), 485.

Manias G, et al. (2024) Advanced Data Processing of Pancreatic Cancer Data Integrating Ontologies and Machine Learning Techniques to Create Holistic Health Records. Sensors (Basel, Switzerland), 24(6).

Bai H, et al. (2024) Indications, technical aspects, and outcomes of stent placement in chronic iliofemoral venous obstruction. Journal of vascular surgery. Venous and lymphatic disorders, 12(5), 101904.

Hu J, et al. (2024) Development and application of Chinese medical ontology for diabetes mellitus. BMC medical informatics and decision making, 24(1), 18.

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Minamiyama Y, et al. (2024) A study on formalizing the knowledge of data curation activities across different fields. PloS one, 19(4), e0301772.

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Morales N, et al. (2022) Breedbase: a digital ecosystem for modern plant breeding. G3 (Bethesda, Md.), 12(7).

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David R, et al. (2022) An iterative and interdisciplinary categorisation process towards FAIRer digital resources for sensitive life-sciences data. Scientific reports, 12(1), 20989.

Osman I, et al. (2021) An Alignment-Based Implementation of a Holistic Ontology Integration Method. MethodsX, 8, 101460.

Delmas M, et al. (2021) FORUM: building a Knowledge Graph from public databases and scientific literature to extract associations between chemicals and diseases. Bioinformatics (Oxford, England), 37(21), 3896.