

Background Resources

The VIVO Project uses a collection of technologies. You may find the materials here helpful in learning more about technologies used by VIVO.

- [RMLMapper](#) – presented at the 2019 VIVO Conference, RMLMapper is a tool for defining maps from data sources to RDF.
- [robot](#) – robot is a command-line Java-based tool of the OBO Foundry for manipulating RDF files and developing ontologies. robot includes a reasoner, a template capability, validation, merge and other ontology tools. The VIVO ontology interest group uses robot to develop ontologies. The Language Ontology was developed using robot.
- [SHACL](#) – W3c Standard Shapes Constraint Language, a standard for specifying constraints on graph data using RDF.
- [Fuseki](#) - Jena project free-standing SPARQL end-point. . Loading VIVO triples into a Fuseki end-point can provide in-memory SPARQL query at high speed.

- [Development Guides](#)
- [FreeMarker](#)
- [Git and GitHub](#)
- [JFact Reasoner](#)
- [Issues tracking](#)
- [Karma for Data Ingestion](#)
- [Maven](#)
- [MySQL](#)
- [Ontology Resources](#)
- [Semantic Web resources](#)
- [SPARQL Resources](#)
- [Tomcat](#)
- [Vitro](#)
- [Zenodo Community Collection](#)