

Ontology Unity Package

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The *Ontology Unity Package* integrates an ontology reasoner to the Unity Game Engine [2] through a web API. The package comes with a set of helper functions in *C#* to do operations on ontologies in Unity, such as querying ontologies, updating facts and inference rules at run time. The package is accessible for academic and research purposes on GitHub¹.

The integrated ontology reasoner, BaseVISor [1], is a forward-chaining inference engine optimized for the processing of RDF triples. BaseVISor supports reasoning services such as realisation, classification, satisfiability, conjunctive query answering, entailment, and consistency. By utilizing the BaseVISor reasoner, we provide an easy to use asset for developing ontology-driven intelligent environments in Unity. The web API based solution allows Unity-ontology projects to be deployed on any device that has internet access.

References

- [1] Christopher J Matheus, Ken Baclawski, and Mieczyslaw M Kokar. “Basevisor: A triples-based inference engine outfitted to process ruleml and r-entailment rules”. In: *2006 Second International Conference on Rules and Rule Markup Languages for the Semantic Web (RuleML’06)*. IEEE. 2006, pp. 67–74.
- [2] Alex Okita. *Learning C# programming with Unity 3D*. AK Peters/CRC Press, 2019.

¹<https://git.io/JMpC6>