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(57) Abstract :

An AI-driven knowledge graph engine for contextual reasoning is disclosed. The engine includes a data acquisition interface (101), an entity and relation extraction module (102), a semantic normalization module (103), a graph repository (104), a contextual state manager (105), a hybrid inference engine (106), a query interpretation controller (107), and an output generation module (108). Heterogeneous source data is converted into canonical graph objects with temporal and provenance attributes. Context vectors guide subgraph selection, and hybrid symbolic-semantic inference produces explainable, context-appropriate conclusions with evidence paths and confidence indicators for enterprise reasoning applications.

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