1. Introduction

ABOUT: This poster discusses the Onto-CropBase, a web-based intelligent search engine for underutilized-crops information retrieval.

Ontology: Any explicit specification of Concepts guiding knowledge representation of a domain. Also the knowledge model of the Semantic Web.

Semantic Web: An extension to the current web of documents. Considered as the ‘future web’ of linked data.

2. Research Goals

• Use of ontologies and other semantic technologies to advance knowledge sharing and standardization for underutilized crops.
• To explore how Semantic Web applications can utilize those ontologies with relevant linked-open-data to aid users in decision making (on underutilized crops and their products).

3. Methodology

• Ontology model development and integration with other data sources: using the Web Ontology Languages (OWL & RDF).
• Developing a web interface for easier and wider access to the knowledge models: using Java EE.
• Developing an ontology-based Semantic Search Engine (SSE) for answering user queries – using SPARQL as query language.
• Selecting a Mediator Component – Apache Jena to integrate the ontology models with the SE.

4. Results

• An underutilized crops ontology (UC-ONTO) representing basic information on Moringa, Bambaragroundnut, and Winged Bean.
• A keyword-based search engine for exploring the knowledgebase.
• Query answering and presentation mechanism.
• Map interface for location-based data.

5. References


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