



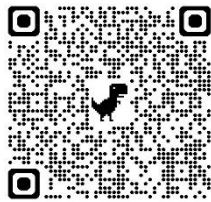
Understanding Semantic Web and Ontologies for Precision Livestock Farming

Date: 11/09/2024

Time: 10 am- 1pm

Total Time: 3 Hours

For Workshop
Registration



For Joining Teams
Meeting



Location: Congresses Piazza della Costituzione Bologna Italy

Workshop Objectives:

This workshop will cover how semantic web technologies and ontologies address data heterogeneity and interoperability, enabling seamless data integration and exchange. It aims to provide a comprehensive understanding of ontologies and their importance in agriculture and precision livestock farming.

The specific objectives of the workshop are:

- **Understand Data Challenges in PLF:** To provide participants with a clear understanding of the data challenges faced in precision livestock farming due to traditional animal health management systems.
- **Learn Ontological Solutions:** To introduce participants to ontologies and semantic web technologies as solutions for data heterogeneity and interoperability issues.
- **Hands-on Training:** To guide participants in building RDF datasets, constructing ontologies, mapping them, and querying with SPARQL in a beginner-friendly environment.

Precision livestock farming faces significant data challenges due to traditional animal information systems. Issues include lack of data standardization, limited interoperability, and poor data quality, which hinder disease surveillance and decision-making. Traditional systems also lack the advanced analytics needed for identifying disease patterns and interventions.

Ontologies offer a solution by providing a standardized vocabulary that enhances data integration and exchange across platforms. Embracing semantic web principles ensures better data sharing and analysis.

The DECIDE project, funded by the EU's Horizon 2020, aims to develop decision-support tools for managing infectious diseases in livestock and aquaculture, focusing on key areas like early warning systems and disease impact assessment. The project adheres to GDPR and FAIR principles, promoting ethical and efficient data management. This workshop, part of DECIDE, aims to train non-experts on ontology-driven animal management systems. This workshop is tailored to accommodate individuals with varying levels of technical expertise, providing an ideal opportunity for beginners to familiarize themselves with these concepts in a supportive setting.

To participate, all you need to bring your laptop and install Protege, which you can download from https://protege.stanford.edu/download/protege/4.3/installanywhere/Web_Installers/

We eagerly anticipate your presence and engagement at the workshop. For inquiries, contact us at sabanoor@ugent.be

Workshop Agenda

Session	Time	Topic	Lead
Session 1	10:00	Introduction: <ul style="list-style-type: none"> • Introduction and overview of the Decide project. • Presentation on tool development with an example of the Cattle Barometer 	Miel Hostens (Cornell University)
Session 2	10:15	Ontologies and RDF <ul style="list-style-type: none"> • Introduction to ontologies and RDF. • Examples of ontology creation and extension. 	Saba Noor (Ghent University)
Session 3	11:00	Ontologies and RDF in Action <ul style="list-style-type: none"> • Practical session on building RDF datasets. • Mapping RDF data with ontologies. • Querying with SPARQL • Discussion 	Saba Noor (Ghent University)
Session 4	13:00	Workshop Close	