



BioValue

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Practice Abstract

BIOVALUE Data Warehouse module

In BioValue, we're developing a **tool to help introduce underutilized crops into the food supply chain**. We're using a modeling approach that looks at how different players interact in the agricultural system. We're considering factors like climate and water availability and aiming to encourage biodiversity by involving market and social influences.

Within this attempt, the creation of a **data warehouse** can be very valuable. In particular a data warehouse helps in:

1. **Collecting and Organizing Information:** The agents might need information, like weather data or historical facts, to make decisions. A data warehouse collects and organizes all this information in one place.
2. **Setting Rules for Agents:** The agents have rules they follow, like "if it's raining, go inside." These rules often depend on data. The data warehouse helps us store these rules and change them easily.
3. **Making Sure Everything Fits Reality:** We want our model to be as close to reality as possible. The data warehouse stores real-world data that we can use to check if the model behaves realistically.
4. **Helping Agents Make Decisions:** When the agents need to decide what to do, they can use data from the warehouse. For example, if they would be cars, they can check traffic data to decide the best route.
5. **Trying Different Scenarios:** We can use the data warehouse to test different situations, like "What happens if it's really sunny?". This helps us to understand how different conditions affect the model.
6. **Seeing What Happened:** After using our model, we can look at the data in the warehouse to see what happened.