

Worksheet #3

April 30th, 2020

Paper: ILP turns 20

- Given the tables in Fig. 1:
 1. explain the differences between these two tables. Why one is more suitable to traditional learning algorithms and the other is more suitable to relational learning?
 2. try representing each one of those tables using a relational approach.
 3. what kind of concepts could you learn from each one of these tables?

Paper: ILP: theory and methods

1. What are the main limitations of classical machine learning models and algorithms?
2. Explain “Prior Satisfiability”, “Posterior Satisfiability”, “Prior Necessity” and “Posterior Sufficiency”. Why are these properties important? Can we violate or remove any one of these conditions to learn concepts? If so, why and in what conditions?
3. What is the function of the “Absorption” inference rule in Inductive Logic Programming?
4. What is “ θ -subsumption”
5. What is inverse resolution?

Paper: Turning 30: new ideas in ILP

1. Why have researchers started to look for other ways of using ILP to learn concepts? (most approaches used Prolog as a base language)
2. How can ILP concepts be learned using neural networks?
3. What is predicate invention?