

## Artificial Intelligence 2

### Quiz #09 (Knowledge in machine learning)

How can we represent a decision tree using a logical formula?

What are the possible forms of inconsistency of example with hypothesis in binary classification?

Describe the current-best-hypothesis method. Is the current best hypothesis consistent with all the processed examples? What is its major disadvantage?

How does generalization of logical formula mean? How can generalization and specialization be realized? If we generalize some formula and then specialize it, will we always get the original formula?

If the example is false negative with the hypothesis, should we generalize or specialize the hypothesis?

What is a version space? How can we compactly represent it? How do we describe the version space containing all hypotheses? How is the version space updated to cover a new example? Is every hypothesis in the version space consistent with all the examples used to construct the version space?

What does collapsing of the version space mean? When does it happen?

What are we learning by inductive logic programming? What is the form of prior knowledge in ILP?

Describe the top-down method of ILP. Is the role of positive and negative examples identical there? What is the property of each clause with respect to positive and negative examples? Is generalization used by the top-down method?

What is inverse resolution? How can it be used in ILP?