

KRR Assignment

CS6770

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Introduction:

The resolution method is a commonly used algorithm in logic and artificial intelligence that is used to derive new logical statements from a set of premises. The input in the XML file can be in the form of premises or rules, and by using the resolution method, we can derive new logical statements that follow from these premises.

Following Step:

Step 1: Reading Input from the XML File:

The first step in using the resolution method is to read the input from the XML file. This can be done using an XML parser or any programming language that has built-in support for reading XML files. The input in the XML file can be in the form of premises or rules, and we need to convert this input into a logical form that can be used by the resolution method.

Step 2: Converting Input to Logical Form:

The second step is to convert the input from the XML file into a logical form. This involves converting each premise or rule into a logical statement that can be used by the resolution method. For example, if the input in the XML file is "All men are mortal" and "Socrates is a man", then we can convert these statements into the following logical statements:

For all x, if x is a man, then x is mortal
Socrates is a man

Step 3: Applying the Resolution Method:

The third step is to apply the resolution method to the logical statements obtained from the XML file. The resolution method involves the following steps:

Convert the logical statements into clauses, which are disjunctions of literals.

Apply the resolution rule, which involves finding two clauses that contain complementary literals and resolving them to obtain a new clause.

Repeat the above step until either a contradiction is obtained, or no further resolutions can be made.

Step 4: Output the Result:

The final step is to output the result obtained from the resolution method. If a contradiction is obtained, then the input in the XML file is inconsistent. If no contradiction is obtained, then we can derive new logical statements that follow from the input in the XML file.