

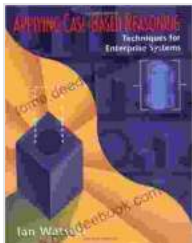
Applying Case Based Reasoning: A Comprehensive Guide

Case-based reasoning (CBR) is a problem-solving method that uses past cases to solve new problems. It is a type of machine learning that is based on the idea that similar problems have similar solutions. CBR has been used to solve a variety of problems, including medical diagnosis, legal reasoning, and engineering design.

The basic principles of CBR are as follows:

- **Similarity:** The similarity between a new problem and past cases is used to determine which cases are most relevant for solving the new problem.
- **Retrieval:** The most relevant past cases are retrieved from a case library.
- **Adaptation:** The retrieved cases are adapted to the new problem.
- **Evaluation:** The adapted cases are evaluated to determine which one is the best solution for the new problem.

The following steps are typically involved in applying CBR:



Applying Case-Based Reasoning: Techniques for Enterprise Systems (The Morgan Kaufmann Series in Artificial Intelligence) by I. D. Oro

★★★★☆ 4.2 out of 5

Language : English

File size : 11192 KB

Text-to-Speech : Enabled
Print length : 290 pages
Paperback : 144 pages
Item Weight : 7 ounces
Dimensions : 6 x 0.33 x 9 inches
Screen Reader : Supported
Grade level : 10 - 12



1. **Identify the problem.** The first step is to identify the problem that needs to be solved.
2. **Represent the problem.** The problem is then represented in a way that can be used by the CBR system.
3. **Retrieve similar cases.** The CBR system retrieves the most similar past cases from the case library.
4. **Adapt the cases.** The retrieved cases are adapted to the new problem.
5. **Evaluate the cases.** The adapted cases are evaluated to determine which one is the best solution for the new problem.
6. **Implement the solution.** The best solution is then implemented.

CBR has several benefits, including:

- **Accuracy:** CBR can be very accurate in solving problems, especially when the new problem is similar to past cases.
- **Efficiency:** CBR can be very efficient in solving problems, especially when the case library is large and well-organized.

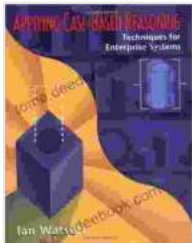
- **Transparency:** CBR is a transparent method, which means that it is easy to understand how the system works and why it makes certain decisions.
- **Flexibility:** CBR is a flexible method, which means that it can be used to solve a variety of problems.

CBR also has some challenges, including:

- **Knowledge acquisition:** The case library must be populated with relevant and high-quality cases. This can be a time-consuming and expensive process.
- **Case representation:** The cases must be represented in a way that can be used by the CBR system. This can be a complex task, especially for problems that are difficult to describe.
- **Similarity assessment:** The similarity between cases must be assessed in order to retrieve the most relevant cases. This can be a challenging task, especially for problems that are complex and have many different features.
- **Adaptation:** The retrieved cases must be adapted to the new problem. This can be a complex task, especially for problems that are significantly different from the past cases.

CBR is a powerful problem-solving method that can be used to solve a variety of problems. It has several benefits, including accuracy, efficiency, transparency, and flexibility. However, CBR also has some challenges, including knowledge acquisition, case representation, similarity assessment, and adaptation.

Despite these challenges, CBR is a valuable tool for solving problems in many different domains. It is a promising area of research, and it is likely to play an increasingly important role in problem-solving in the future.



Applying Case-Based Reasoning: Techniques for Enterprise Systems (The Morgan Kaufmann Series in Artificial Intelligence) by I. D. Oro

★★★★☆ 4.2 out of 5

Language : English

File size : 11192 KB

Text-to-Speech: Enabled

Print length : 290 pages

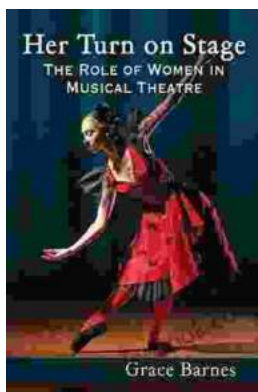
Paperback : 144 pages

Item Weight : 7 ounces

Dimensions : 6 x 0.33 x 9 inches

Screen Reader: Supported

Grade level : 10 - 12



Her Turn On Stage: Stepping Into The Spotlight Of Empowerment, Confidence, and Transformation

In the realm of personal growth and empowerment, there's a transformative moment that ignites a flame within us, a moment when we step out of the shadows and onto the...



Mastering the Pick Indicator System: A Comprehensive Guide with Trading Rules

In the ever-evolving world of trading, traders constantly seek reliable and effective tools to enhance their decision-making and improve their...