UNIT-4

CLASSIFICATION

CASE BASED REASONING:

- Case-Based Reasoning(CBR) resolve new problems by adjusting previously fortunate solutions to alike problems.
- Roger Schank is widely held to be the beginning of CBR.
- He proposed a unalike sight on model-based reasoning stimulated by human logical and memory organization.

KEY PARAMETERS OF CBR.

Regularity-

The identical steps executed under the same circumstances will tend to have the same or alike outcomes.

Typicality-

Experiences tend to repeat themselves.

Consistency-

Minor switch in the circumstances require merely small changes in the explanation and in the effect.

Adaptability-

When things replicate, the dissimilarities tend to be minute, and the small differences are uncomplicated to repay for.

WORKING CYCLE OF CBR :

Case retrieval –

After the issue result has been judged, the best coordinating case is explored in the case base and an estimated solution is retrieved.

Case adaptation –

The recovered result is adjusted to fit finer the new issue.

Solution evaluation –

The modified solution can be judged either before the solution is applied to the complication or after the solution has been applied, the modified solution must be adapted again or more cases should be modified.

Case- based updating –

If the solution was verified as correct the new case may be added to the case.

KNOWLEDGE IN CBR :

Vocabulary includes the knowledge necessary for choosing the features utilized to describe the cases.

- Case features have to be specified so that they can be helpful in retrieving other cases, which contains useful solutions to similar problems.
- Similarity estimation include the mastery about the similarity measure itself and the grip used to choose the most efficient firm of the employed case base and the most suitable case-retrieval method.
- Modification knowledge includes the knowledge necessary for executing the adaptation and evaluation phases of the CBR working cycle.
- Cases contain knowledge about solved problem instances and, in many CBR systems, this represents the knowledge that the system acquire during use.

BENEFITS OF CBR :

- CBR supports ease of knowledge elicitation.
- CBR works efficiently in the absence of problem solving bias.
- It is suitable for multiplex and not completely formalized result position.
- It holds up ease of explanation.
- It carry ease of maintenance.

LIMITATIONS :

- CBR finds it complex to handle large case bases.
- It is almost impossible for CBR to solve dynamic domain problems
- CBR method is unable in handling noisy data