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A Novel Prediction Based Tree Structured Data Using Machine Learning Techniques.

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ABSTRACT

Tree structured data is like a path that shows where the data is stored in databases Up to now various similar functions are implemented for tree structured data. Tree structured data is not easy to apply for all applications like document clustering and NLP these applications we are introducing new functions for structured data. An automatic decision making system had been introduced to analyze the sub tree hierarchical structure of an organization, and suggest a refactoring structure in case of loophole.

Keywords: Tree Structured Data, Pattern Analysis, Decision Making, sub-tree forming, Artificial Intelligence, Clustering.

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INTRODUCTION

Design Analysis is an unmistakable framework, for evaluating an individual's centre inspiration in choice making forms, in light of the restrained examination. Choice making is a centre movement of administration and it assumes an imperative part in any procedure of usage.

For every Organization, Most decisions are made considered as time consuming to methodically identify pros and cons for each alternative in decisions made on a daily basis. In case of issues with the performance of the company, the major milestone is based on the hierarchical structure [2]. In the existing system, the tree based hierarchy of designation in an organisation has been setup with the distance based sub tree analysis. An automatic decision making schema had been introduced to analyse the sub tree hierarchical structure of an organization, and suggest a refactoring structure in case of loophole. In the proposed system, Refactored Decision structure [4] of the organization has been analysed for the best fit, and possibility way of fixing the hierarchy sorted out and the process of redesigning the structure has been carried out.

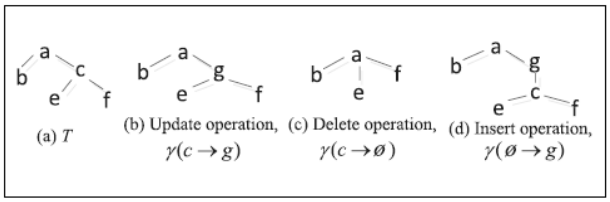

Fig 1.1 Tree operations

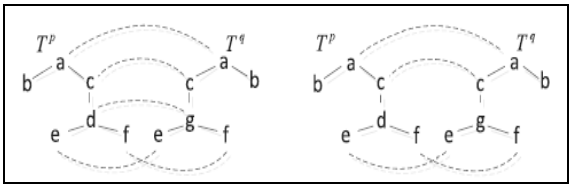

Fig 1.2 Varieties of tree operations

EXISTING SYSTEM

Hierarchical clustering is a method of cluster analysis which seeks to build a hierarchy of clusters. The Strategies [8] for hierarchical clustering are divided into two categories such as

Agglomerative: This is a "base up" methodology: every perception begins in its own bunch, and combines to form groups. The groups are converged so that one climbs the hierarchy. The bunches are firmly protected.

Divisive: This is a "top down" methodology: all perceptions begin in one group, and parts are performed recursively as one move down the progressive system.

A various **level** of an association is considered in the current framework [2], the familiarize issue in the progressive level has been recognized by the method for Heuristic Predecessor Based AI Mechanism. A programmed framework has been created to give the proposals to the procured issue in the various leveled structure. This framework [7] gives just the conceivable answer for reframing the progressive structure to utilizing the procedure of Agglomerative grouping.

PROPOSED SYSTEM

In the anticipated framework, a mechanized arrangement of rebuilding the chain of command with choice making model has been made.

At first, an unframed various leveled outline of an association is inputted in the framework, the issue in the progressive structure is distinguished by standard configuration design correlation [6]. The idea of

counterfeit consciousness is used in the anticipated framework n which the unframed framework is gained into choice making process.

A programmed framework has been created to give the proposals to the obtained issue in the various leveled structure of the association and the structure has been reframed.

The anticipated framework gives just the conceivable answer for reframing the progressive structure utilizing the methodology of Agglomerative grouping and reorders the various leveled structure along these lines beats the downsides of existing framework.

DRAWBACKS

- More Time consuming procedure.
- Depending on manual power.
- Take much time to identify the optimal solution for a problem.

EXISTING SYSTEM ALGORITHMS

A. *Discarding Global Unpromising Items algorithm.*

Compute Transaction Weighted Utility (TWU) of Item sets.
E.g. TWU(A) = u(T1, T1) + u(T2, T2) + u(T3,T3)
then discard unpromising units from each transaction
Shift arrange the items in a descending order of TWU and
Calculate the new Restructured Transaction Utility.
E.g. RTU(T2)=Previous TU(T2)-[Q(G)*P(G)]

B. *Decreasing Global Node utilities algorithm.*

Select the items for transaction.
Fix these items into Up-Tree under root node structure.
Transverse through these node and select next items and insert it into UP-Tree

PROPOSED SYSTEM ALGORITHM

Hierarchical neural pattern

Hierarchical neural pattern algorithm for pattern recognition algorithm is the modular approach where it forms a hierarchically [1] extendable procedure, involving a tree-like architecture, which performs a node-by-node unsupervised classification for the given input. Henceforth we have

$$y_q = \sum (x_i * w_{iq})$$

ADVANTAGES

- Problem can be solved within min duration
- It is fully automatic system

ARCHITECTURE

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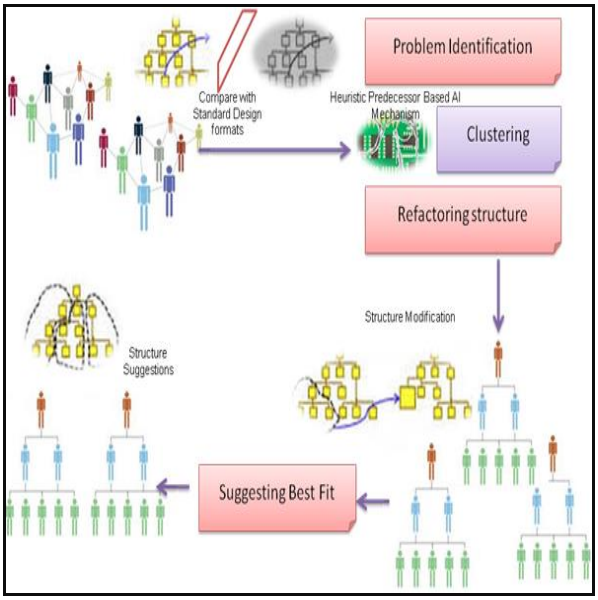

Fig 1.3 Architecture Diagram of AI System

Modules

1. Organizational Structure Define Module
2. Sub Tree Segregation Module
3. Sub Tree Compare Module
4. Possible Decision Module
5. Sub Tree Suggestion Module
6. Organizational Restructuring Module
7. Possible Organization Structure Module
8. Performance Evaluation

Module Descriptions

Organizational Structure Define Module

The authoritative Structure Define Module characterizes the structures that are firmly coordinated with the organization. In this module they examine about how the association ought to be characterized by hierarchic and interior business reporting necessity.

Sub Tree Segregation Module

In this module we enforce absolute data segregation between business entities.

Data Administrators must create a new module with an Argument value so as to allocate segregation between the solutions and problems raise in the organisation.

In all other cases, a better alternative for the suggestion is to rely on the sub tree.

In this module the Sub tree enables to be a part of both the parent node data and their sub tree information [3] data's.

Sub Tree compares Module

It compares the various sub tree and hence find the the relatively optimum tree.

Possible Decision Module

In this possible decision module, the Decisions taken in an organisation/firm will be providing the advanced voting replicates and augments what so ever is possible. This module does not support missing values but will enhance the decision possibilities.

Sub Tree Suggestion Module

In this sub tree suggestion Module the Commonality for decision Tree - posted in Suggestions will results in providing optimal suggestion in the firm. The Sub tree normally has a large number of modules shared by various Refactoring structure.

Organizational Restructuring Module

In this module based on the Refactoring structure taken in the firm, the organizational structure will be clustered accordingly and decisions will be taken further.

Possible Organization Structure Module

Based on the efficiency the Structure Suggestions in the results will be considered in this module of approach.

Performance Evaluation

In this module after the suggestion taken by the various decisions, the performance of the results will be calculated and analysed further.

CONCLUSION

In this paper we implemented and developed prediction based tree structured data using artificial intelligence. The decision making system hence forth plays a vital role to giving optimal solution. The performance can also be analysed using the well know analysis method.

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