8. CONCLUSION AND FUTURE WORK

Computing in the cloud provides demand-based provisioning and applications as a service. A considerable amount of collaborative content is stored in the cloud and the management of that content is given as service. Despite the prevalence of cloud, storage management and retrieval from the content management is a challenging task. The accuracy in retrieval and pruning the unrelated content is the essential task. The research addresses the significant issues in storing, managing, retrieving and tracking the content in the cloud. The main conclusion of this research is the development of Document based content management system (DSCMS) model in the cloud for e-learning environment. DSCMS model in the cloud provides a comprehensive approach of fourfold similarity with an end-to-end semantic solution.

The semantic content marker is developed to enable the user to identify and annotate the source links with essential words in the virtual document created. A distributed structure and Meta-keyword based crawler focusses on the users need and harvest the URLs based on the domain of the query. The crawled URLs are stored and managed periodically with the help of rendering engine.

It facilitates a combination of clustering and classification techniques. The proposed semantic clustering accomplishes the differences in accuracy and hence it is developed to optimize the quality of clusters. The classifiers assist the user to rank the URL for retrieval purpose. It also analyzes the word sense disambiguation with sequence word algorithm which resolves polysemy and neutral essential keywords.

The recommender system developed supports the model in recommending the frequently visited and marked web documents. These marked documents are tracked for changes. The detection of changes is identified using content change in the document.
This model is deployed in a distributed framework which acts as a platform for cloud implementation. The real world data sets are considered for evaluation and analysis. Henceforth the DSCMS model contributes to the enhancement of semantic CMS with the specific features to handle complex queries. The analysis of DSCMS model shows that it is far better than the keyword-based CMS regarding relevant retrieval. The benefits of the proposed system include content-based retrieval with the efficient storage management and an inbuilt tracking system. The semantic analysis performed in the proposed model is unique and it’s a fourfold similarity. The validation of the fourfold similarity measure is also demonstrated to show its uniqueness. It also empowers the recommender system which accomplishes a personalized user-centric retrieval.

**Future Work**

The developed model can also be customized to the different domains like health management and online shopping. The semantic analysis can be narrowed down profoundly to create ontological relationship among the words of a specified domain. Topic-based latent semantic indexing can be introduced to enhance the storage management and retrieval. Security can be provided to the components of DSCMS model. Especially change tracker can be secured by authentication and authorization policies which are already initiated in the thesis. The DSCMS model has a high potential in extending the components for intelligent search, retrieval and tracking based on deep learning and cognitive sciences. The clustering can be improvised by topic modelling and topic specific user focused model by gathering inputs from the social media. Ensemble classification can be introduced to replace the existing Naviebayesian and score based classification.

This model can be integrated as a part of the massive open online courses which can establish its functionalities and aid in creative teaching and learning. The different features like inbuilt tracking, personalized recommendation distinguishes the system from the traditional information retrieval based systems.