SAPTHAGIRI COLLEGE OF ENGINEERING

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-560057

Department of Computer Science and Engineering

Certificate

Certified that the project work entitled **"Search Optimization using Incremental and Distributed Inference Method"** carried out by **RAGHU M (1SG12CS082), RAJATHA N RAO (1SG12CS086), SAMARTHA M PATIL (1SG12CS094), SHRUTHI S KUMAAR (1SG12CS108),** bonafide students of **this institute**, in partial fulfillment for the award of **Bachelor of Engineering** in **Computer Science and Engineering** of **Visvesvaraya Technological University**, **Belgaum** during the academic year **2015-16.** It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the said degree.

Ancy Thomas 18/5/16		
Signature of the Guide	Signature of the HOD	**Signature of the Principal**
Prof. Ancy Thomas	**Dr. Prashanth C M**	**Dr. Aswatha Kumar M**
Assistant Professor	Professor & Head	Principal
		Dr. Aswatha Kumar. M Principal Sapthagiri College of Engineering No. 14/5, Chikkasandra Hesaraghtta Main Road, Bangalore-560 057

Name of the Examiners **Signature with date**

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ABSTRACT

With the upcoming data deluge of semantic data, the fast growth of data has brought significant challenges in performing efficient and scalable reasoning. Traditional centralized reasoning methods are not sufficient to process large data. Distributed reasoning methods are thus required to improve the scalability and performance of inferences. The proposed incremental and distributed inference method using MapReduce, realizes high-performance reasoning and runtime searching, especially for incremental knowledge base. By constructing Transfer Inference Forest (TIF) and Effective Assertional Triples (EAT), the storage is largely reduced and the reasoning process is simplified and accelerated. Finally, a prototype system is implemented on a Hadoop framework and the experimental results validate the usability and effectiveness of the proposed approach.