

SAPTHAGIRI COLLEGE OF ENGINEERING

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

Department of Computer Science and Engineering

Certificate



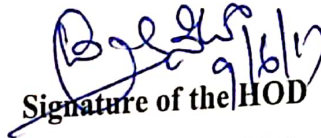
Certified that the project work entitled "RRW-ROBUST AND REVERSIBLE WATERMARKING TECHNIQUE FOR DATA RECOVERY" carried out by bonafide students Alisha Raj (1SG13CS013), Archana Sinha (1SG13CS132), Ginia Dey (1SG13CS133), and Nidhi Singh (1SG13CS131), of Sapthagiri College Of Engineering, in partial fulfillment for the award of Bachelor of Engineering in Computer Science and Engineering of Visvesvaraya Technological University, Belagavi during the academic year 2016-17. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report. The project report has been approved as it satisfies the academic requirements in respect of Project work (10CS85) prescribed for the said degree.

 9/6/17

Signature of the Guide

Prof. Roopa Banakar

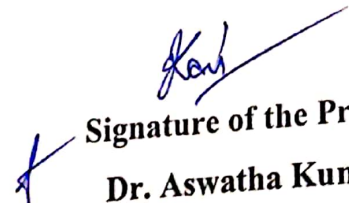
Assistant Professor

 9/6/17

Signature of the HOD

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Professor & Head

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Dr. Aswatha Kumar M

Principal

Name of the Examiners

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Signature with date

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ABSTRACT

Watermarking techniques have historically been used to ensure security in terms of ownership protection and tamper proofing for a wide variety of data formats. Watermarking is advocated to enforce ownership right over shared relational data and for providing a means for tackling data tampering. When ownership rights are enforced using watermarking, the underlying data undergoes certain modifications; as a result of which, the data quality gets compromised. Reversible watermarking is employed to ensure data quality along-with data recovery. However, such techniques are usually not robust against malicious attacks and do not provide any mechanism to selectively watermark a particular attribute by taking into account its role in knowledge discovery. Therefore, reversible watermarking is required that ensures; watermark encoding and decoding by accounting for the role of all the features in knowledge discovery; and, original data recovery in the presence of active malicious attacks. A robust and reversible watermarking (RRW) technique for relational data has been proposed that addresses the above objectives.