14/5, Chikkasandra, Hesaraghatta Main Road, Bengalury-56/937

Department of Computer Science and Engineering



CERTIFICATE

Certified that the project work entitled "An efficient method for detection of leakage of sensitive data" carried out by Mrs. Chaitra H.V (1SG16SCS01), a bonafide student of Sapthagiri College of Engineering, Bengaluru in the partial fulfillment for the award of Master of Technology in Computer Science& Engineering of the Visvesvaraya Technological University, Belagavi during the year 2018-2019. It is certified that all corrections/suggestions indicated for the Internal Assessment have been incorporated in the Report deposited in the departmental library. The Project report has been approved as it satisfies the academic requirements in respect of project work (16SCS44) prescribed for the said degree.

Professor & Head of the Department Computer Science Engineering Signature of Control College of Engineering

Dr. Yogish

Professor& HOD

Signature of the Principal

Principal Sapthagin Conlege of Engineering Chincapara, Hesaraghatta Road

Bangalore-560 057

External viva

Name of the Examiners

1. N. YOUEST

Signature of the Examiner and date

Sapthagiri College of Engineering

Chikkasandra, Hesaraghatta Road, Bangalore-560 057

BENGALURU-560057

(Affiliated to Visvesvaraya Technological University, Belagavi, Karnataka)

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING



CERTIFICATE

SYBIL DETECTION AND RANKING IN ONLINE SOCIAL NETWORK" carried out by Latha K (1SG13SCS03), a bonafide student of Sapthagiri College Of Engineering, Bengaluru, in partial fulfillment for the award of Master of Technology in Computer Science and Engineering of Visvesvaraya Technological University, Belagavi during the academic year 2017-2018. It is certified that all the corrections/suggestions have been incorporated in the dissertation deposited in the department library. the dissertation report has been approved as it satisfies the academic requirements in respect of dissertation work prescribed for the said degree.

Signature of Guide

Ramangouda S Patil

Assistant Professor

Signature of HOD

Dr. Yogish H.K

Professor & HOD

Signature of Principal

Dr. Aswatha Kumar H

Dr. Aswincipal Kumar. M

Sapthagiri Colloge of Engineering No. 14/5, Chikkasandra, Hesaraghtta Main Road, Bangalore-560 057

Signature of the Examiners with date

External Viva

Name of the Examiners

on Road. Principal
on 057
te
Sapthagiri College of Engine

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

Department of Computer Science and Engineering



CERTIFICATE

Certified that the project work entitled "Security Enhancement to Exchange Health Information on Cloud" carried out by Ms. HEMALATHA K (1SG15SCS03), a bonafide student of Sapthagiri College of Engineering, Bengaluru in the partial fulfillment for the award of Master of Technology in Computer Science& Engineering of Visvesvaraya Technological University, Belagavi during the year 2016-2017. It is certified that all corrections/suggestions indicated in the report. The Project report has been approved as it satisfies the academic requirements in respect of project work (14SCS44) prescribed for the said degree.

Signature of the Guide Compu Signature of Propineering Signature of the Principal Sapthagiri College of Engineering

Mrs. Kavitha G

Dr. M. Aswatha Kumar

Assistant. Professor

Dr. M. Aswatha Kumar Dr. Aswatha Kumar. M Principal Principal Sapthagiri Colloge of Engineering Professor & HOD

No. 14/5, Chikkasandra, Hesaraghtta Main Road, Banga ore-560 057 External viva

the Pothagiri College of Estinature of the Examiners with date Name of the Examiner

Bangalore-560 057

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

Department of Computer Science and Engineering



CERTIFICATE

Certified that the project work entitled "Exploring the Similarity and Dissimilarity of User Opinions for Sentiment Analysis in Heterogeneous Networks" carried out by SANDEEP B S (1SG15SCS10), a bonafide student of Sapthagiri College of Engineering, Bengaluru in the partial fulfillment for the award of Master of Technology in Computer Science& Engineering of Visvesvaraya Technological University, Belagavi during the year 2016-2017. It is certified that all corrections/suggestions indicated in the report. The Project report has been approved as it satisfies the academic requirements in respect of project work (14SCS44) prescribed for the said degree.

Signature of the Guide

Prof. Suriya Prakash J Assistant Professor

Signature of the Principal

Septility of the beker Engineering Dr. Mr. Wathan Kumar. M

thagiri Colloge of Engineering Hesaraghtta Main Road, Bangalore-560 057

External viva

Name of the Examiners

1. Rauncha Barad. S 2. 5. Suyya Phakash

Signature of the Examiners with date

Sapthagiri College of Engineering Chikkasandra, Hesaraghaita Road, Bangalore- 560 057

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

Department of Computer Science and Engineering



CERTIFICATE

Certified that the project work entitled "An Efficient Resource Management Method for Cloud" carried out by Mrs. ASHWINI M (1SG15SCS01), a bonafide student of Sapthagiri College of Engineering, Bengaluru in the partial fulfillment for the award of Master of Technology in Computer Science& Engineering of Visvesvaraya Technological University, Belagavi during the year 2016-2017. It is certified that all corrections/suggestions indicated in the report. The Project report has been approved as it satisfies the academic requirements in respect of project work (14SCS44) prescribed for the said degree.

Prignature of Guide Engineering Computer Science of Engineering Professor & HOD

Signature of the Principal

Dr. Aswatha Kumar. M Dr. M. Aswatha Kumar Sapthagiri Colloge of Engineering

Principal's, Chikkasandra, Hesaraghtta Main Road, Bangalore-560 057

External viva

Name of the Examiner

1. Dr. Yogich H.K 2. Prof. Murali.G

Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Road, Bangalore-560 057 Signature of the Examiner with date

6..05/10/17

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

Department of Computer Science and Engineering



CERTIFICATE

Certified that the project work entitled "News Content Extraction from Web Pages Using Google API" carried out by NEHA M (1SG14SCS09), a bonafide student of Sapthagiri College of Engineering, Bengaluru in the partial fulfillment for the award of Master of Technology in Computer Science & Engineering of Visvesvaraya Technological University, Belagavi during the year 2016-2017. It is certified that all corrections/suggestions indicated in the report. The Project report has been approved as it satisfies the academic requirements in respect of project work (14SCS44) prescribed for the said degree.

Signature of the Guide

Mr. Ashok K Patil

Assistant Professor

Signature of the HOD

Dr. Yogish HK

Professor & HOD

Signature of the Principal

Dr. M. Aswatha Kumar Dr. Aswatha Kumar, M

Principal Principal Sapthagiri Colloge of Engineering No. 14/5, Chikkasandra, Hesaraghtta Main Road, Bangalore-560 057

External viva

Name of the Examiners

Signature of the Examiners with date

Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Road, Bangaicre-560 057

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

Department Of Computer Science and Engineering



CERTIFICATE

Certified that the project work entitled "Enhanched initial seed selection algorithm for efficient clustering of high dimensional data" carried out by Ms. AMBIKA S (1SG14SCS02), a bonafide student of Sapthagiri College of Engineering, Bangalore in the partial fulfillment for the award of Master of Technology in Computer Science & Engineering of the Visvesvaraya Technological University, Belgaum during the year 2016-2017. It is certified that all corrections/suggestions indicated in the report. The Project report has been approved as it satisfies the academic requirements in respect of project work (14SCS44) prescribed for the said degree.

Signature of the Guide

Mrs. Kavitha G

Assistant Professor

128/09/17

Signature of the HOD

Dr. Yogish H.K

Professor & HOD

Signature of the Principal

Dr. M. Aswatha Kumar Dr. Aswatha Kumar. M Principal Sapthagin College of Engineering

No. 14/5, Chikkasandra, Hesaraghtta Main Road, Bangalore-560 057

External viva

Name of the examiners

1. Vovithe h

2. Do of the Be

Signature of the examiners with date

Principal Engine And College of Engine College o

Chikkasandra, Hesaraghata Bangalore-560 057

BENGALURU-560057

(Affiliated to Visvesvaraya Technological University, Belgaum, Karnataka)

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING



CERTIFICATE

Certified that the dissertation work entitled "MINING HIGH UTILITY ITEMSETS IN TRANSACTIONAL DATASET" carried out by Sowmya R B (1SG14SCS16), a bonafide student of Sapthagiri College of Engineering, Bangalore, in partial fulfillment for the award of Master of Technology in Computer Science and Engineering of Visvesvaraya Technological University, Belgaum during the academic year 2015-2016. It is certified that all the corrections/suggestions have been incorporated in the dissertation deposited in the departmental library. The dissertation report [14SCS44] has been approved as it satisfies the academic requirements in respect of dissertation work prescribed for the said degree.

Signature of the Guide

Mrs. Roopa Banakar

Assistant Professor

Signature of HOD

Dr. C.M. Prashanth

Professor & H.O.D

Signature of principal

Dr. M. Aswatha kumar
Dr. Aswatha Kumar M
Principal
Principal
Principal
Principal
No. 14/5, Chikkasandra,

Hesaraghatta Main Road, Bangalore - 560 057.

External viva

Name of the examiners

1. Dr. Cs. Pillar

2. Roopa Banakar

Signature of the Examiners with date

1. The

2. BB

Principal

Sapthagiri College of Engineering
Chikkasandra, Hesaraghatta Road,
Bangalore-560 057

BENGALURU-560057

(Affiliated to Visvesvaraya Technological University, Belgaum, Karnataka)

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING



CERTIFICATE

MECHANISM FOR CLASSIFICATION OF IMBALANCED DATA" carried out by KRITHIKA M V (1SG14SCS08), a bonafide student of Sapthagiri College of Engineering, Bangalore, in partial fulfillment for the award of Master of Technology in Computer Science and Engineering of Visvesvaraya Technological University, Belgaum during the academic year 2015-2016. It is certified that all the corrections/suggestions have been incorporated in the dissertation deposited in the departmental library. The dissertation report[14SCS44] has been approved as it satisfies the academic requirements in respect of dissertation work prescribed for the said degree.

16.08.2016 Signature of the Guide

Prof. Rajeev Bilagi

Associate Professor

Signature of HOD

Dr. C.M. Prashanth

Professor & H.O.D

Signature of Principal

Dr. M. Aswatha Kumar
Dr. Aswatha Kumar. M
Principal Principal
Sapthagiri Colloge of Engineering
No. 14/5, Chikkasandra,
Hesaraghtta Main Road,
Bangalore-560 057

External viva

Name of the examiners

1. Rajeer · Poilagi

2. Machu N.

Signature of the Examiners with date

1. Befridagi 1918/2016

2. Wall 19/3/2016,

Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Road, Bangalore- 560 057

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

Department Of Computer Science and Engineering



CERTIFICATE

Certified that the project work entitled "Segmenting Customer Using Association Rule Mining On Big Data" carried out by Miss. Supriya Koganurmath (1SG14SCS19), a bonafide student of Sapthagiri college of engineering, Bangalore in the partial fulfillment for the award of Master of Technology in Computer Science & Engineering of the Visvesvaraya Technological University, Belgaum during the year 2015-2016. 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 with respect to the project work (14SCS44) prescribed for the said degree.

Signature of the Guide

Mrs. Madhushree

Assistant Professor

Dr. C. M. Prashanth

Professor & HOD

Signature of the Principal

Dr. M. Aswatha Kumar

Principal

External viva

Name of the examiners

1. Madhushree

2. Latha Rani. T.R.

Signature of the examiners with date

Sapthagiri College of Engineering

Chikkasandra, Hesaraghatta Road, Bangalore-560 057

14/5, Chikkasandra, Hesarghatta Main Road, Bangalore-560057 (Affiliated to Visvesvaraya Technological University, Belgaum, Karnataka.)

Department Of Computer Science and Engineering



CERTIFICATE

Certified that the project work entitled "A context aware rules recommendations system for similar users" carried out by Mrs. Pushpa L (1SG14SCS12), a bonafide student of Sapthagiri college of engineering, Bangalore in the partial fulfillment for the award of Master of Technology in Computer Science & Engineering of the Visvesvaraya Technological University, Belgaum during the year 2015-2016. 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 with respect to the project work (14SCS44) prescribed for the said degree.

Signature of the Guide

Mrs. Ragini Krishna

Assistant Professor

External viva

Name of the examiners

1. Ragini krishna

2. Varalatshni 60

Signature of the HOD

Dr. C.M.Prashanth

Professor & HOD

Signature of the Principal

DorMa Aswatha Kumar. M

Principal
Principal
Principal
Pippiri Colloge of Engineering
No. 14/5, Chikkasandra,
Hesaraghtta Main Road,
Bangalore-560 057

Signature of the examiners with date

13/10/16

Principal
Sapthagiri College of Engineering
Chikkasandra, Hesaraghatta Road,
Bangalore- 560 057

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

Department Of Computer Science and Engineering



CERTIFICATE

Certified that the project work entitled "Detection of Wormhole Attack using T-AOMDV Protocol" carried out by Ms. SEEMA B.P. (1SG14SCS14), a bonafide student of Sapthagiri College of Engineering, Bangalore in the partial fulfillment for the award of Master of Technology in Computer Science & Engineering of the Visvesvaraya Technological University, Belgaum during the year 2015-2016. It is certified that all corrections/suggestions indicated in the report. The Project report has been approved as it satisfies the academic requirements in respect of project work (14SCS44) prescribed for the said degree.

Signature of the Guide

Mrs. Roopa Banakar

Assistant Professor

ignature of the HOD

Dr.C.M.Prashanth

Professor & HOD

Signature of the Principal

Dr. M. Aswatha Kumar

Principal Principal

Sapthagiri Cellage of Engin in No. 14/5, Chikkasandra, Hesaraghatta Main Road, Bangalore - 500 057.

External viva

Name of the examiners

Signature of the examiners with date

Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Road,

Bangalore-560 057

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

Department Of Computer Science and Engineering



CERTIFICATE

enhanced ensemble classifier" carried out by Mrs.Usha.B.P (1SG14SCS20), a bonafide student of Sapthagiri college of engineering, Bangalore in the partial fulfillment for the award of Master of Technology in Computer Science & Engineering of the Visvesvaraya Technological University, Belgaum during the year 2015-2016. It is certified that all corrections/suggestions indicated 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 (14SCS44) prescribed for the said degree.

Signature of the Guide

Mrs. Sushmitha.J

Assistant Professor

Signature of HOD

Dr C.M.Prashanth

Professor & HOD

Signature of principal

Do Ne wataha Kumarar. M

No. 12/12/2016 No. 12

External viva

Name of the examiners

1. Suspinitha

2. Sushina T MI

Signature of the examiners with date

25/10/16.

Principal

Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Road, Bangalore- 560 057

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

Department of Computer Science and Engineering



CERTIFICATE

Certified that the project work entitled "Filter Based Fusion of Panchromatic and Multispectral Image to Improve Spectral Quality" carried out by Mr. Kirankumar.A (1SG14SCS07), a bonafide student of Sapthagiri College of Engineering, Bangalore in partial fulfillment for the award of Master of Technology in Computer Science & Engineering of the Visvesvaraya Technological University, Belgaum during the year 2015-2016. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of project work (14SCS44) prescribed for the said degree.

Signature of the Guide

Mrs. Ancy Thomas

Assistant Professor

Dr. C.M. Prashanth

Professor & H.O.D

Signature of the Principal

Dr. Aswatha Kumar . M rincipal hatta Main Road

Bangalore - 560 057

External viva

Name of the Examiners

1. Ancy Thomas

2. B. Grayathri. Kamath

Signature of the Examiners with date

Principal

Sapthagiri College of Engineering , Chikkasandra, Hesaraghatta Road, Bangalore-560 057

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

Department Of Computer Science and Engineering



CERTIFICATE

Certified that "IMPROVISED the project entitled work RECOMMENDATION SYSTEM USING HYBRID USER MODELLING TECHNIQUE" carried out by Mrs. C.NADHIYA (1SG14SCS03), a bonafide student of Sapthagiri college of engineering, Bangalore in the partial fulfillment for the award of Master of Technology in Computer Science & Engineering of the Visvesvaraya Technological University, Belgaum during the year 2015-2016. It is certified that all corrections/suggestions indicated in the report. The Project report has been approved as it satisfies the academic requirements in respect of project work (14SCS44) prescribed for the said degree.

Signature of the Guide

Mrs. A. Latha

Assistant Professor

Signature of the HOD

Dr.C.M.Prashanth

Professor & HOD

Signature of the Principal

Dr. M. Aswatha Kumar

Principal

Dr. Aswatha Kumar M

Principal
Sapthagiri College of Engineering
No.14/5, Chikkasandra,
Hesaraghatta Main Road,
Bandakote - 560 057

Signature of the examiners with date

External viva

Name of the examiners

1. Catha

2. Hemalathe K.L

Helite 8/12/16

Principal

Principal

Sapthagiri College of Engineering

Sapthagiri College of Engineering

Chikkasandra, Hesaraghatta Road.

Chikkasandra, Hesaraghatta Road.

Bangalore-560 057

14/5, Chikkasandra, Hesaraghatta Main Road,

Bangalore-560057

(Affiliated to Visvesvaraya Technological University, Belgaum, Karnataka)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING



CERTIFICATE

Certified that the internship work entitled "A Software Tool Based on Sox For Edit and Delete Operation on Modules" carried out by KRITHIKA M V (1SG14SCS08), a bonafide student of Sapthagiri College of Engineering, Bangalore, in partial fulfillment for the award of III semester, Master of Technology in Computer Science and Engineering of Visvesvaraya Technological University, Belgaum during the academic year 2015-2016. It is certified that all the corrections/suggestions have been incorporated in the report deposited in the departmental library. The internship report has been approved as it satisfies the academic requirements in respect to viva voce on internship report (14SCS33) prescribed for the said degree.

Signature of the Guide

Prof. Rajeev Bilagi

Associate Professor

Signature

Dr. C.M. Prashanth

Signature

Dr. M. Aswatha Kumar

Bangalore - 560 057.

External viva

Name of the examiners

1. Rajew. Pri Lagi

2. RAJAGEICHAR N

Prote Professon & H.O.D.D. Department Principal
Computer Science Engineering r. Aswatha Kumar M

Computer Science Engineering Principal
Sapthagiri College of EngineeringSapthagiri College of Engineering

No. 14/5, Chikkasandra,

Bangalore-57

Hesaraghatta Main Road,

Signature of the examiners with date

1. Barilugi 30.11.15

2. Afor gen 2 20.4.15

Principal
Principal
Sapthagiri College of Engineerin
Chikkasandra, Hesaragharta Road
Bangalore- 560 057

14/5, Chikkasandra, Hesarghatta Main Road, Bangalore-560057 (Affiliated to Visvesvaraya Technological University, Belgaum, Karnataka.)

Department Of Computer Science and Engineering



CERTIFICATE

Certified that the project work entitled "A context aware rules recommendations system for similar users" carried out by Mrs. Pushpa L (1SG14SCS12), a bonafide student of Sapthagiri college of engineering, Bangalore in the partial fulfillment for the award of Master of Technology in Computer Science & Engineering of the Visvesvaraya Technological University, Belgaum during the year 2015-2016. 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 with respect to the project work (14SCS44) prescribed for the said degree.

Signature of the Guide

12/10/16

Mrs. Ragini Krishna

Assistant Professor

External viva

Name of the examiners

1. Ragini krishora 2. Vanalakshui ko

Signature of the HOD

Dr. C.M.Prashanth

Professor & HOD

Signature of the Principal

Dr. M. Aswatha Kumar Dr. Aswatha Kumar. M

Ricipal ri Colloge of Engineering No. 14/5, Chikkasandra, Hesaraghtta Main Road, Principal Bangalore-560 057

Signature of the examiners with date

Sapthagiri College of Engineering

Chikkasandra, Hesaraghatta Road, Bangalore-560 057

BENGALURU-560057

(Affiliated to Visvesvaraya Technological University, Belgaum, Karnataka)

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING



CERTIFICATE

Certified that the dissertation work entitled "MINING USER OPINIONS ON DIFFERENT PRODUCT ASPECTS FROM ONLINE PRODUCT REVIEWS" carried out by ANKITHA SARIKA SINGH (1SG14SCS01), a bonafide student of Sapthagiri College of Engineering, Bangalore, in partial fulfillment for the award of Master of Technology in Computer Science and Engineering of Visvesvasraya Technological University, Belgaum during the academic year 2015-2016. It is certified that all the corrections/suggestions have been incorporated in the dissertation deposited in the departmental library. The dissertation report[14SCS44] has been approved as it satisfies the academic requirements in respect of dissertation work prescribed for the said degree.

Signature of the Guide

Prof. Poornima G J

Assistant Professor

Signature of HOD

Dr. C.M. Prashanth

Professor & H.O.D

Signature of Principal

Dr. M. Aswatha Kumar
Dr. Aswatha Kumar. M
Principal Frincipal
Sapthagiri Colloge of Engineering
No. 14/5, Chikkasandra,
Hesaraghtta Main Road.

Bangalore-560 057

External viva

Name of the examiners

1. Poornina. G.J

2. Prof. Vrinda Slett

Signature of the Examiners with date

4)10 -25

2.

2/1/12

Principal
Principal
Sapthagiri College of Engineering
Chikkasandra, Hesaraghatta Read,
Bangalore-560 057

14/5, Chikkasandra, Hesarghatta Main Road, Bangalore-560057 (Affiliated to Visvesvaraya Technological University, Belgaum, Karnataka.)

Department Of Computer Science and Engineering



CERTIFICATE

Certified that the project work entitled "A context aware rules recommendations system for similar users" carried out by Mrs. Pushpa L (1SG14SCS12), a bonafide student of Sapthagiri college of engineering, Bangalore in the partial fulfillment for the award of Master of Technology in Computer Science & Engineering of the Visvesvaraya Technological University, Belgaum during the year 2015-2016. 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 with respect to the project work (14SCS44) prescribed for the said degree.

Signature of the Guide

Mrs. Ragini Krishna

Assistant Professor

External viva

Name of the examiner

1. Ragini krishora 2. Varalakshui ko

Signature of the HOD

Dr. C.M.Prashanth

Professor & HOD

Signature of the Principal

Dr. M. Aswatha Kumar

Principal

Principal

Principal

Roo 14/5, Chikkasandra,

Hesaraghtta Main Road,

Rangalora 550 007 Bangalore-560 057

Signature of the examiners with date

Principal Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Road, Bangalore-560 057

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

Department Of Computer Science and Engineering



CERTIFICATE

Certified that the project work entitled "High Coherent Association Rule Mining Using Propositional Logic" carried out by Mrs. GEETHA G (1SG14SCS05), a bonafide student of Sapthagiri college of engineering, Bangalore in the partial fulfillment for the award of Master of Technology in Computer Science & Engineering of the Visvesvaraya Technological University, Belgaum during the year 2015-2016. It is certified that all corrections/suggestions indicated in the report. The Project report has been approved as it satisfies the academic requirements in respect of project work (14SCS44) prescribed for the said degree.

Signature of the Guide

Ms. Veena K.R.

Assistant Professor

nature of the HOD

Dr.C.M.Prashanth

Professor & HOD

Signature of the Principal

Dor Ma Assyatha Kumar M

Principal
Reipoipali Colloge of Engineering No. 14/5, Chikkasandra. Hesaraghtta Main Road, Bangalore-560 057

External viva

Name of the examiners

1. Nai dila Sad artiv Signature of the examiners with date

Sapthagirl College of Engineering Chikkasandra, Hesaraghatta Road Bangalore-560 057

2.

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

Department Of Computer Science and Engineering



CERTIFICATE

Certified that the project work entitled "Entity Resolution in The Unstructured Data Streams" carried out by Ms. POORNIMA NAMBIAR (1SG14SCS11), a bonafide student of Sapthagiri College of Engineering, Bangalore in the partial fulfillment for the award of Master of Technology in Computer Science & Engineering of the Visvesvaraya Technological University, Belgaum during the year 2015-2016. It is certified that all corrections/suggestions indicated in the report. The Project report has been approved as it satisfies the academic requirements in respect of project work (14SCS44) prescribed for the said degree.

Signature of the Guide & HOD

Dr. C.M. Prashanth

Professor & HOD

Signature of the Principal
Dr. Aswatha Kumar. M
Dr. M. Aswatha Kumar
Sapmagiri Colloge of Engineering
No. 14/5, Chikkasandra,
Principal of the Principal of the

External viva

Name of the examiners

1.

2.

Signature of the examiners with date

Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Road, Bangalore- 560 057

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

Department Of Computer Science and Engineering



CERTIFICATE

Certified that the project work entitled "Detection of Wormhole Attack using T-AOMDV Protocol" carried out by Ms. SEEMA B.P. (18G14SCS14), a bonafide student of Sapthagiri College of Engineering, Bangalore in the partial fulfillment for the award of Master of Technology in Computer Science & Engineering of the Visvesvaraya Technological University, Belgaum during the year 2015-2016. It is certified that all corrections/suggestions indicated in the report. The Project report has been approved as it satisfies the academic requirements in respect of project work (14SCS44) prescribed for the said degree.

Signature of the Guide

Mrs. Roopa Banakar

Assistant Professor

ignature of the HOD

Dr.C.M.Prashanth

Professor & HOD

Signature of the Principal

Dr. Ms Aswatha Kumas ar. M

Bangalore - 560 057.

Principal SPrincipalCellage of Engine in No. 14/5, Chikkasandra Hesaraghatta Main Road,

External viva

Name of the examiners

1. Dr. Verinda Shetty 2. Roopa Banakar

Signature of the examiners with date

Principa

Sapthagiri College of Engine Chikkasandra, Hesaraghatta Ro

Bangalore-560 057

BENGALURU-560057

(Affiliated to Visvesvaraya Technological University, Belgaum, Karnataka)

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING



CERTIFICATE

Certified that the dissertation work entitled "AN EFFICIENT MECHANISM TO DETECT AND REDUCE DDOS FLOODING ATTACKS" carried out by VIKAS B O (1SG13SCS17), a bonafide student of Sapthagiri College of Engineering, Bengaluru, in partial fulfillment for the award of Master of Technology in Computer science and Engineering of Visvesvaraya Technological University, Belgaum during the academic year 2014-2015. It is certified that all the corrections/suggestions have been incorporated in the dissertation deposited in the department library; the dissertation report has been approved as it satisfies the academic requirements in respect of dissertation work prescribed for the said degree.

Signature of the Guide

Mr. Rajeev Bilagi

Associate Professor

Signature of HOD

Dr. C.M. Prashanth

Professor & H.O.D

Signature of Principal

Dr. M. Aswatha Kumar Dr. Aswatha Kumar. M Principal Principal Sapthagiri Collogs of Engine ling No. 14/5, Chikkasandra, Hesaraghatta Main Road, Bangalore - 560 057.

External Viva

Name of the Examiners

Rajeer. Rilagi Nimala Hiremani

Signature of the Examiners with date

Principal Sapthagiri College of Engineerin Chikkasandra, Hesaraghatta Road, Bangalore-560 057

BENGALURU-560057

(Affiliated to Visvesvaraya Technological University, Belgaum, Karnataka)

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING



CERTIFICATE

Certified that the dissertation work entitled "Hybrid Classifier for Data Leakage Prevention" carried out by VEENA V (1SG13SCS13), a bonafide student of Sapthagiri College of Engineering, Bengaluru, in partial fulfillment for the award of Master of Technology in Computer Science and Engineering of Visvesvaraya Technological University, Belgaum during the academic year 2014-2015. It is certified that all the corrections/suggestions have been incorporated in the dissertation deposited in the department library. The dissertation report has been approved as it satisfies the academic requirements in respect of dissertation work prescribed for the said degree.

Signature of the Guide

Dr. C. M Prashanth

Professor & HOD

Signature of Principal

Dr. Aswatha Kumar M

Dr. Aswatha Kumar. M IFM Hall Sapthagiri Collage of Engine ting No. 14/5, Chikkasandra, Hesaraghatta Main Road, Bangalors -560 057.

External Viva

Name of the Examiners

1. Dr. Mohan t.g. 2. Dr. Psayshant CM.

Signature of the Examiners with date

Sapthagiri College of Engineerin Chikkasandra, Hesaragha Bangalore-560 057

14/5, Chikkasandra, Hesaraghatta Main Road

Bangalore-560057

(Affiliated to Visvesvaraya Technological University, Belgaum, Karnataka)

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING



CERTIFICATE

Certified that the dissertation work entitled "An Efficient Route Discovery Mechanism in Wireless Sensor Network" carried out by NANDINI M (1SG12SCS08), a bonafide student of Sapthagiri College of Engineering, Bangalore, in partial fulfillment for the award of Master of Technology in Computer Science and Engineering of Visvesvaraya Technological University, Belgaum during the academic year 2014-2015. It is certified that all the corrections/suggestions have been incorporated in the dissertation deposited in the department library. The dissertation report has been approved as it satisfies the academic requirements in respect of dissertation work prescribed for e said degree.

Signature of the Guide

Dr. C. M. Prashanth

Professor and HOD

External Viva

Name of the Examiner

1. Dr. Brashank (m) 2. Ziam-Rahmen

Signature of the Examiner with date 10/10/2011

Signature

Dr. Aswatha Kumar M

Principal Dr. Aswatha Kumar. M

Principal Sapthagiri Collage of Engine ing No. 14/5, Chikkasandra, Hesaraghatta Main Road, Bangalore -560 057.

Sapthagiri College of Enginee ing Chikkasandra, Hesaraghatta Road, Bangalore-560 057

BENGALURU-560057

(Affiliated to Visvesvaraya Technological University, Belgavi, Karnataka)

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING



CERTIFICATE

Certified that the dissertation work entitled "AN ENERGY EFFICIENT DATA TRANSFER MECHANISM IN WIRELESS SENSOR NETWORKS"carried out by KAVYA RAMAKRISHNA (1SG13SCS15), a bonafide student of Sapthagiri College of Engineering, Bengaluru, in partial fulfillment for the award of Master of Technology in Computer science and Engineering of Visvesvaraya Technological University, Belgavi during the academic year 2014-2015. It is certified that all the corrections/suggestions have been incorporated in the dissertation deposited in the department library; the dissertation report has been approved as it satisfies the academic requirements in respect of dissertation work prescribed for the said degree.

Signature of the Guide

Mrs.Poornima G J

AssistantProfessor

Dr. C.M.Prashanth

Professor&H.O.D

Signature of Principal

r. M. Aswatha Kumar r. Aswatha Kumar M

Principal Principal Sprincipal Collage of Engine ing No. 14/5, Chikkasandra, Hesaraghatta Main Road. Bangalore - 560 057.

External Viva

Name of the Examiners

Signature of the Examiners with date

1. Dr. GGRIJAMAHA.

Principal Sapthagiri College of Engineerin Chikkasandra, Hesaraghatta Road, Bangalore-560 057

BENGALURU-560057

(Affiliated to Visvesvaraya Technological University, Belgaum, Karnataka)

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING



CERTIFICATE

Certified that the dissertation work entitled "Hybrid Classifier for Data Leakage Prevention" carried out by VEENA V (1SG13SCS13), a bonafide student of Sapthagiri College of Engineering, Bengaluru, in partial fulfillment for the award of Master of Technology in Computer Science and Engineering of Visvesvaraya Technological University, Belgaum during the academic year 2014-2015. It is certified that all the corrections/suggestions have been incorporated in the dissertation deposited in the department library. The dissertation report has been approved as it satisfies the academic requirements in respect of dissertation work prescribed for the said degree.

Signature of the Guide

Dr. C. M Prashanth

Professor & HOD

Signature of Principal

Dr. Aswatha Kumar M

Dr. Aswatha Kumar. M Principal Sapthagiri Collage of Engine ing No. 14/5, Chikkasandra, Hesaraghatta Main Road, Bangalore -560 057.

External Viva

Name of the Examiners

1. Dr. MOHAN K.G. 2. Do . PEASLANT CM.

Signature of the Examiners with date

Sapthagiri College of Engin Chikkasandra, Hesaraghatta

Bangalore-560 057

BENGALURU-560057

(Affiliated to Visvesvaraya Technological University, Belgaum, Karnataka)

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING



CERTIFICATE

Certified that the dissertation work entitled "Preserving Privacy For Group Matching In Social Networks" carried out by SHALINI D(1SG13SCS09), a bonafide student of Sapthagiri college of engineering, bengaluru, in partial fulfillment for the award of Master of Technology in Computer science and Engineering of Visvesvaraya Technological University, Belgaum during the academic year 2014-2015. It is certified that all the corrections/suggestions have been incorporated in the dissertation deposited in the department library. The dissertation report has been approved as it satisfies the academic requirements in respect of dissertation work prescribed for the said degree.

Signature of the Guide

Stenature of HOD

Signature of Principal

Mrs. Kamalakshi Naganna

Dr. C.M. Prashanth

Dr. AswathankunoamMr M

Associate Professor

Professor & H.O.D

Principal Sapthagiri Callage of English in Principal/5, Chikkasandra, Hesaraghatta Main Road, Bangalore -560 057.

External Viva

Name of the Examiners

Signature of the Examiners with date

1. Kamalakshi Maganu 1. Keley 2. Vajada Stetty 2. History

Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Road, Bangalere- 560 057

BENGALURU-560057

(Affiliated to Visvesvaraya Technological University, Belgaum, Karnataka)

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING



CERTIFICATE

Certified that the dissertation work entitled "INTEREST BASED INTERACTIVITY THROUGH CROSS PLATFORM IN BIG DATA" carried out by SRIKANTHAGOWDA R (1SG13SCS12), a bonafide student of Sapthagiri College of Engineering, Bengaluru, in partial fulfillment for the award of Master of Technology in Computer science and Engineering of Visvesvaraya Technological University, Belgaum during the academic year 2014-2015. It is certified that all the corrections/suggestions have been incorporated in the dissertation deposited in the department library. The dissertation report has been approved as it satisfies the academic requirements in respect of dissertation work prescribed for the said degree.

A 30/9/15

Signature of the Guide

Mrs. Latha A

Assistant Professor

Signature of HOD

Dr. C.M. Prashanth

Professor & H.O.D

Signature of Principal

Dr. Aswatha Kumar M

Principal Aswatha Kumar M

Principal
Sapthagiri Collage of Engine ling
No. 14/5, Chikkasandra,
Hesaraghatta Main Road,
Bangalore -560 057.

External Viva

Name of the Examiners

Signature of the Examiners with date

1. A. battia

2. Dr. S. R. Nayuk 2. E

nua 14/20/2015

of Engineer!

Sapthagiri College Chikkasandra, Hesaraghatta Road. Bangalore-560 057

BENGALURU-560057

(Affiliated to Visvesvaraya Technological University, Belagavi, Karnataka)

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING



CERTIFICATE

Certified that the dissertation work entitled "AN EFFICIENT ANONYMOUS SECURE ROUTING PROTOCOL FOR MANETS" carried out by WAHIDUL HASSAN (ISG13SCS18), a bonafide student of Sapthagiri College of Engineering, Bengalura, in partial fulfillment for the award of Master of Technology in Computer science and Engineering of Visvesvaraya Technological University, Belagavi during the academic year 2014-2015. It is certified that all the corrections/suggestions have been incorporated in the dissertation deposited in the department library, the dissertation report has been approved as it satisfies the academic requirements in respect of dissertation work prescribed for the said degree.

121/1/16

Signature of the Guide

Mrs. Roopa Banakar

Assistant Professor

Signature of HOD

Dr. C.M. Prashanth

Professor & H.O.D

Signature of Principal

Dr. Aswatha Kumar M

Principal

External Viva

Name of the Examiners

1. VANIKS.

2. Dr. Praglact Con

Signature of the Examiners with date

By Sur _ , r Sapthagiri College of Engi Chikkasandra, Hesaraghatta Road,

Bangalore-560 057

eering

BENGALURU-560057

(Affiliated to Visvesvaraya Technological University, Belgaum, Karnataka)

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING



CERTIFICATE

Certified that the dissertation work entitled "AN ENHANCED SECURITY AND HIGH THROUGHPUT FOR MULTICAST ROUTING IN WIRELESS MESH NETWORK" carried out by SOWMYA SOMANATH (1SG13SCS11), a bonafide student of Sapthagiri college of engineering, bengaluru, in partial fulfillment for the award of Master of Technology in Computer science and Engineering of Visvesvaraya Technological University, Belgaum during the academic year 2014-2015. It is certified that all the corrections/suggestions have been incorporated in the dissertation deposited in the department library. The dissertation report has been approved as it satisfies the academic requirements in respect of dissertation work prescribed for the aid degree.

Signature of the Guide

Mrs. Veena Gadad

Asst. Professor

Signature of HOD

Dr. C.M. Prashanth

Professor & H.O.D

Signature of Principal

Dr. Aswatha Kumar .M

Principal

External Viva

Name of the Examiners

Signature of the Examiners with date

1. Niema la ffilemanis.

What 18/9/15

Principal
Principal
Sapthagiri College of Engine and Chikkasandra, Hesaraghat and Bangalore-560 05

SAPTHAGIRI COLLEGE OF ENGINEERING 14/5, Chikkasandra, Hesarghatta Main Road, Bangalore-560057

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

This is to certify that VEENA.K.N.(1SG16LVS04), a bonafide student of Sapthagiri College of Engineering, has satisfactorily completed Project work entitled, "Design and analysis of ECG Signal filtering using haar wavelets for arrhythmias detection on FPGA", in partial fulfillment of the requirements as prescribed by the VTU for IV semester, Master of Technology in VLSI Design & Embedded Systems during the academic year 2017 - 18.It is certified that all corrections/suggestions indicated for internal assessment have been incorporated in the report deposited in the department library.

Signature of the Guide

Signature of HOD

Sapthagispourtegethe Prigingaring Chikkpsardrad esaragha ta Road Bangalore 500 05

Signature

Mrs.Shobha.S

l' Mrs.Sandhya Rani M H

Principal

Associate Professor Dept of ECE

Associate Professor Bungfif Gradu US7.

SCE, Bangalore

Name of the Examiners

1. K. E. Shilaearan

Principal

Sapthagiri College of Engineering

Chikkasandra, Hesaraghatta Bood Chikkasandra, Hesaraghatta Road, Bangalore-560 057

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-560057 DEPARTMENT OF ELECTRONICS AND COMMUNICATION **ENGINEERING**



CERTIFICATE

This is to certify that MEGHA HEGDE (1SG16LVS03), a bonafide student of Sapthagiri College of Engineering, has satisfactorily completed the Froject work ent fled "Development and Implementation of Gabor Filter in Medical Imaging", in partial fulfillment of the requirements as prescribed by the Visvesvaraya Technological University for IV semester, Master of Technology in VLSI Design & Embedded Systems during the year 2017-18. It is certified that all corrections/suggestions indicated for internal assessment have been incorporated in the report deposited in the department library.

Signature of the Guide

Mrs. Agalya Sivakumar P

Associate Professor

Dept of ECE, SCE

Signature of HOD

Mrs. Sandhya Rani M H

Associate Professor & HOD

Dept of ECE, SCE

Signature of Principal

Dr. K L Shivabasappa

Principal

SCE, Bengaluru

EXTERNAL VIVA

Name of the Examiners

1] F. Agalya 2] P. Bohmaseswari

Signature

Principal Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Road. Bangalore-560 057

SAPTHAGIRI COLLEGE OF ENGINEERING 14/5, Chikkasandra, Hesarghatta Main Road, Bengaluru-560057

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

This is to certify that MAHANTESH R.S. (1SG16LVS02), a bonafide student of Sapthagiri College of Engineering, has satisfactorily completed Project work entitled, "Design and Implementation of light weight Block ciphers PRESENT and HIGHT Algorithms on FPGA", in partial fulfillment of the requirements as prescribed by the VIU for IV semester, Master of Technology in VLSI Design & Embedded Systems during the academic year 2017 - 18. It is certified that all corrections/suggestions indicated for internal ment have been incorporated in the report deposited in the department il rary.

Sure of the Guide

De Sasmita Mohapatra

Professor

Desc of ECE

Signature of HOI

Head of the Department S Electronics & ChyarRani MtHon

apthadispositionerofessameering

Deprofection 057

Sapthagini and legging Engineering

Chikkasandra, Hesarajaatta Road Dr. Banga Shiyattasappa

Principa_

SCE, Bergaluru

Examiners

Principal

Principal

Sapthagiri College of Engineering

Hesaraghatta Road,

Chikkasandra, Hesaraghatta Road, Bangalore-560 057

Signature

SAPTHAGIRI COLLEGE OF ENGINEERING 14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-560057

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

This is to certify that KOKILA.B.PADEPPAGOL (ISG16LVS01) has satisfactorily Completed the Project work entitled "Design and Implementation of Stegn Image Encoding and Decoding System using Lifting based Wavelet and Adaptive LSB Method on FPGA", in partial fulfillment of the requirements as prescribed by the Visveswaraya Technological University for IV semester, Master of Technology in VLSI Design & Embedded Systems during the year 2017 – 18. It is certified that all corrections/suggestions indicated for internal assessment have been incorporated in the report deposited in the department library.

Ldext

Signature of the Guide

Mrs. Sandhya Rani M H

Associate Professor & HOD

Dept. of ECE

Andrett 10/08/2018

Signature of HOD

Mrs. Sandhya Rani M H

Associate Professor & HOD

Dept. of ECE

Signature of Principal

Dr. K L Shivabasappa

Princips1

SCE, Bangalore

Head of the Department Electronics & Communication Sapthagiri College of Engineering Bangalore 560 057.

External viva

Name of the Examiners

1. Sandinga Remi Mitt.

Principal

2. Do ASHA C-Nipthagiri College of Engineering Chikkasandra, Hesaraghatta Road,

Signature

and 14 20/08/18

20/8/18

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

DEPARTMENT OF ELECTRONICS AND COMMUNICATION

ENGINEERING



CERTIFICATE

This is to certify that GANGADHARA SWAMY M S (18G13LVS02) has satisfactorily the Project work entitled "Implementation of Hand Sign Interpreter Using Embedded in partial fulfillment of the requirements as prescribed by the Visveswaraya logical University for IV semester, Master of Technology in VLSI Design and Embedded during the year 2016-17. It is certified that all corrections/suggestions indicated for internal ment have been incorporated in the report deposited in the department library.

ndytt

Secure of the Guide

Mrs. Sandhya Rani M H

* sociate Professor & HOD

Dent of ECE, SCE

Signature of HOD

Mrs. Sandhya Rani M H

Head of the Department Element Element ECE, SGE unication Sapthage

Bangalor, 500 057.

Signature of the Principal

Dr. Aswatha Kumar M

Drincipal Principal

Sapthagiri Colloge of Engineering
Not 1981 Shirk as andra,
Hesaraghtta Main Road,
Bangalore-560 057

External Viva

Name of the Examinar

Signature

3

Principal

Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Road, Bangalore- 560 057

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-560057 DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

This is to certify that Ms. HEMA N (1SG15LVS02) has satisfactorily completed the Project entitled "Implementation of Human Countenance and Audience Analytics on a Digital sage System", in partial fulfillment of the requirements as prescribed by the Visvesvaraya Technological University for IV semester, Master of Technology in VLSI Design & Embedded sestems during the year 2016-17. It is certified that all corrections/suggestions indicated for internal sessment have been incorporated in the report deposited in the department library.

Indept

Signature of the Guide

Mrs. Sandhya Rani M H

Associate Professor & HOD

Name of the Examiners

2) Sandhya Rami M.H.

11 ARCHANA. H.R

Dept of ECE

Signature of HOD-

Mrsa Sandhya Rani M. Hnt

Electsoniate Professor William Sapthagigi College of Engineering

Bangalor 560 057.

External Viva

Signat_re of Principal

Dr. Aswatha Kumar M

Principal

SCE, Bengaluru Dr. Aswatha Kumar. M Principal

Santhagiri Collogs of Engineering Nc. 14/5, Chikkasandra, Hesaraght: Main Road, Signature Main Ros

Principal

Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Road,

Bun, alore- 560 057

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru- 560057 DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

This is to certify that Mr. SHARATH RAJ R, USN:1SG12LVS11 has satisfactorily months and the Project work entitled "Design and Analysis of Alias Locked Loop Components in Technology" in partial fulfillment of the requirements as prescribed by the Visvesvaraya Techogical University for 4th semester M. Tech. in VLSI Design and Embedded System the year 2016-2017. It is certified that all corrections/suggestions indicated for internal sessment have been incorporated in the report deposited in the departmental library.

Name & Signature of Guide Prof. AGALYAP AssociateProfessor

Dept. of ECE

Name & Signature of HOD Prof. SANDHYA RANI M H. Associate Professor & HOD,

Dept. of ECE

Name & Signature of Principal Dr. Aswatha Kumar M Professor & Principal

SCE, Bengaluru

e of the Examiners

Dr. A. SHOBHA RANI

Signatures

Principal

Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Road,

Bangalore-560 057

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-560057
DEPARTMENT OF ELECTRONICS AND COMMUNICATION
ENGINEERING



CERTIFICATE

This is to certify that VANRAMMAWIA (1SG15LVS09) has satisfactorily completed the project work entitled "ECG Acquisition System With Lower DC Offset: An architectural Model", in partial fulfillment of the requirements as prescribed by the VTU for IV emester, Master of Technology in VLSI DESIGN & EMBEDDED SYSTEMS during the year 16-17. It is certified that all corrections/suggestions indicated for internal assessment have been proporated in the report deposited in the department library.

Signature of the Guide

Mrs. Shobha Hugar

Ass_stant Professor

Dept of ECE

and get

Signature of HOD

Mrs. Sandhya Rani M H

Associate Professor & HOD

Dept of ECE

Signature of Principal

Dr. Aswatha Kumar M.

Sapthagiri Colloge of Engineering
No. 1976 6350 Kerrincepal
Hesaraghta Main Roac,
Bangararer 660.067.

BangsCE, Bengalu-u

External Viva

Name of Examiners

1. K-P. NAGAPOSHPA

2 SHOBHA HUGAR

Principal

Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Road, Bangalore- 560 057 Signature With Date

Nagaprohpa 21/09/17

SEN. H. 19/17

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-560057 DEPARTMENT OF ELECTRONICS AND COMMUNICATION **ENGINEERING**



CERTIFICATE

This is to certify that PRIYA N. (1SG15LVS07) has satisfactorily completed the Interim evaluation of Preject work entitled "An Efficient Digital Baseband Encoder for Short Range Wireless Communication Applications", in partial fulfillment of the requirements as prescribed by the VTU for IV semester, Master of Technology in VLSI DESIGN & EMEEDDED SYSTEMS during the year 2016-17. It is certified that all corrections/suggestions indicated for assessment have been incorporated in the report deposited in the department library.

Smaller of the Guide

Mrs. Sasmita Mohapatra

Professor

Dept of ECE

Signature of HOD

Mrs. Sandhya Rani M H

Associate Professor & HOD

Dept. of ECE

Signature of Principal

Dr. Aswatha Kumar M

Principa!

SCE, Bengaluru

External Viva

and of the Examiner

= Phonthi

= La Sumite Mohapatapthagiri College of Engineering
Chikkasandra, Hesaraghatta Road,

Bangalore-560 057

Signature

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-560057 DEPARTMENT OF ELECTRONICS AND COMMUNICATION **ENGINEERING**



CERTIFICATE

This is to certify that MRINALINI B L (1SG15LVS05) has satisfactorily completed the Project work entitled "Design and Implementation of Low Cost Efficient Beckons using Wireless Sensor Network for the Digital Signage System", in partial fulfillment of the requirements as prescribed by the Visveswaraya Technological University for IV semester, Master of Technology in VLSI Design and Embedded Systems during the year 2016-17. It is certified that all corrections/suggestions indicated for internal assessment have been incorporated in the report deposited in the department library.

Signature of the Guide

Mrs. P. Agalya Sivakumar

Associate Professor

Dept of ECE

Signature of HOD

Mrs. Sandhya Rani M H

Associate Professor & HOD

Dept of ECE

Signature of the Principal

Dr. Aswatha Kumar M

D-. Aswatha Kumar. M Principal cipal Sapthag ri Colloge of Engineering No. 14/5 Chirkasandra, Hesaraghtta Main Road,

Bangalore-56C 057

External Viva

Principal

Name of the Examiners

P. Agalya

Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Road, Bangalore-560 057

Signature

01.09.2017

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru- 560057 DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

This is to certify that Ms. SUSHMA S., USN 1SG14LVS21 has satisfactorily completed the Project work entitled "DESIGN AND IMPLIMENTATION OF MICRO-PROGRAMMED FIR FILTER USING EFFICIENT MULTIPLIERS ON FPGA" in partial fulfillment of the requirements as prescribed by the Visvesvaraya Technological University for 4th semester M. Tech. in VLSI Design and Embedded System during the year 2015-2016. It is certified that all corrections/suggestions indicated for internal assessment have been incorporated in the report deposited in the departmental library.

Name & Signature of Guide

Prof. SHOBHAS. Associate Professor

Dept of ECE

Name & Signature of HOD cation Name & Signature of Principal El Professor & HOD, Professor & Principal Professor & Principal Name & Signature of Principal El Professor & Principal Name & Signature of Principal Name &

Dept of EGFor, 580 057.

SCE, Bengaluru Principal
SCE, Bengaluru Principal
SCE, Bengaluru Principal
Spinagiri Colloge of Engireering
No. 14/5, Chikkasandra,
Hesaraghtta Main Road,
Bangalore-560 05

Name of the Examiners

1. LETHA-B.N.

2. S. SITOBHA

Signatures

Latha B. N. 04/08/16 Stutted c4/8/16

Principal

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru- 560057 DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

This is to certify that Ms. SMITHA M. R., USN 1SG14LVS20 has satisfactorily completed the Project work entitled "Design of Finite State Machine and VHDL Implementation of ARINC 717 and ARINC 429 Ip Cores and Integration of Ip Cores" in partial fulfillment of the requirements as prescribed by the Visvesvaraya Technological University for 4th semester M. Tech. in VLSI Design and Embedded System during the year 2015-2016. It is certified that all corrections/suggestions indicated for internal assessment have been incorporated in the report deposited in the departmental library.

Name & Signature of Guide Prof. Agalya P. Associate Professor Dept of ECE, SCE

Name & Signature of HOD Prof. SANDHYA RANI M. H. Associate Professor & HOD. Dept. of ECE

andrytt

Name & Signature of Principal Dr. Aswatha Kumar M. Principal SCE, Bengaluru

40000

External Viva

Name of the Examiners

1. p. Agalga 2 SIDDLETH.M.B.

Signatures

Sidd 5/8/2016

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru- 560057 DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

This is to certify that Ms. Shraddha Kallappa Walikar, USN 1SG14LVS19 has actorily completed the Project work entitled "Real-Time Pedestrian Detection Algorithm Traffic-Signal-Control System" in partial fulfillment of the requirements as prescribed by Wsvesvaraya Technological University for 4th semester M. Tech. in VLSI Design and System during the year 2015-2016. It is certified that all corrections/suggestions for internal assessment have been incorporated in the report deposited in the mental library.

Kumar M

Electronich & Rahim H

Santhagira College of HIQD ceringripel swatha Kuma- M Dent Bangalor -560 057.

Name & Signature of Principal

Dr. Aswatha Kumar M

SCE, Bengalarincipal Sapthagiri Colloge of Engineering

No. 14/5, Chikkasanda, Hesaraghtta Main Road, Bangalore-560 057

Signatures of the Examiners

1--- 1. 5.N.

The Enteriners

Latha B.N. 30/2/16

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru- 560057 DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

This is to certify that Mr. Sharath kumar H J, USN 1SG14LVS18 has satisfactorily completed the Project work entitled "Design and Implementation of PRESENT and LED Lightweight Ciphers and Deciphers on FPGA" in partial fulfillment of the requirements as prescribed by the Visvesvaraya Technological University for 4th semester M. Tech. in VLSI Design and Embedded Systems during the year 2015-2016. It is certified that all corrections/suggestions indicated for internal assessment have been incorporated in the report deposited in the departmental library.

Associate Professor Dept. of ECE, SCE

Name & Signature of Guide Name & Signature of Prof. Sandya Rani M H

Name & Signature of Principal

Bathagar Oollege of EHOReering Principal CE, Bengaluru CPBahgalon 9560 057.

External Viva

The of the Examiners

Sandhya Rang M.H.

= GR POORNIMA

Signature with Date

- Cylt 06/08/2016

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru- 560057
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

This is to certify that Ms. PRIYANKA T N., USN 1SG14LVS17 has satisfactorily completed the Project work entitled "DESIGN AND IMPLEMENTATION OF PARALLEL DECISION TREE CLASSIFICATION ACCELERATOR ON FPGA" in partial fulfillment of the recuirements as prescribed by the Visvesvaraya Technological University for 4th semester M. Tech. in VLSI Design and Embedded System during the year 2015-2016. It is certified that all corrections/suggestions indicated for internal assessment have been incorporated in the report deposited in the departmental library.

Signature of Guide Mrs. Vani A. Assistant Professor Dept. of ECE

Signature of HOD Mrs. SANDHYA RANI M H. Associate Professor & HOD, Dept. of ECE Signature of Principal Aswatha Kumar. M Dr. Aswatha Kumar Principal Professor & Sapthaciri Colloge of Engineering No. 14/5, Chikkasantra, SCE, Bengalmasaraghtta Main Read, Bangalore-560 05:

External Viva

Name of the Examiners

1 Shellidhara HA

2 (Quick

Signature with Date

Q-4 27/0x

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru- 560057 DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

This is to certify that Ms. NITHYA M., USN 1SG14LVS15 has satisfactorily completed Project work entitled "PERFORMANCE ANALYSIS OF FACE DETECTION USING VISUAL DESCRIPTORS AND CLASSIFIERS FOR A COLOR IMAGE' in partial Iment of the requirements as prescribed by the Visvesvaraya Technological University for semester M. Tech. in VLSI Design and Embedded System during the year 2015-2016. It is certified that all corrections/suggestions indicated for internal assessment have been incorporated the report deposited in the departmental library.

Name & Signature of Guide Prof. VANI V. Assistant Professor

Dept. of ECE

Name & Signature of HOD Prof. SANDHYA RANI M H. **Associate Professor & HOD**

Dept. of ECE

Name & Signature of Principal

Dr. Aswatha Kumar

Professor & Principal

SCE, Bengaluru

Dr. Aswatha Kumar. M Frincipal

Sapthagiri Colloge of Eng neering No. 14/5 Chikkasandra, Hesaraghtta Main Read,

BSignal Dies 560 057

e of the Examiners

> Siva Yellampalli

Vani. V

2817/29-7-16 Mar. V 29/7/2016

Principal

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-560057 DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

This is to certify that Ms. NAZIA TARANNUM, USN 1SG14LVS14 has satisfactorily completed the Project work entitled "FEMUR SEGMENTATION AND LENGTH

ULTRASOUND IMAGES BASED FROM **FOETAL** MEASUREMENT WATERSHED ALGORITHM WITH AND WITHOUT SMOOTHENING TECHNIQUE" in partial fulfillment of the requirements as prescribed by the Visvesvaraya Technological University for 4th semester M. Tech. in VLSI Design and Embedded System during the year 2015-2016. It is certified that all corrections/suggestions indicated for internal assessment have been incorporated in the report deposited in the departmental library.

Signature of Guide Mrs. Sangeeta K. Siri Assistant Professor, Dept. of ECE

Electron Sandhya Raminumication pr. Aswatha Kumar

Bangaior 560 057.

Signature of Principal Associate Professor Engineering Professor & than city nar. M Industrial Schallenge of Engineering Schallenge lugge of Engineering

No. 14/5, Chikkasandra, Hesaraghtta Main Road, Bangalore-560 057

External Viva

Name of the Examiners

Signatures

Stylaja S.L

Principal

Sapthagiri College of Engineering Chikkasan 'a Hasaraghatta Road,

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru- 560057 DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

This is to certify that Mr. MANJUNATH ASKI, USN 1SG14LVS13 has satisfactorily completed the Project work entitled "Design and Implementation of E-health Smart Networked System Using IoT" in partial fulfillment of the requirements as prescribed by the Visvesvaraya Technological University for 4th semester M. Tech. in VLSI Design and Embedded Systems during the year 2015-2016. It is certified that all corrections/suggestions indicated for internal assessment have been incorporated in the report deposited in the departmental library.

Prof. PRATHIBHA P. **Assistant Professor**

Dept. of ECE

Santingint Cottege of & Horogring Professor & Principal ephanigator 560 057.

e Name & Signature of HOD Name & Signature of Principal EleProposand HOD RANHM. H. Dr. ASWATHA KUMAR M.

SCE, BenggluruAswatha Kumar. M

Principal
Sapthagiri Colloge of Engineering
No. 14/5, Chikkasandra,
Hesaraghtta Main Foad,
Bangalore-560 057

External Viva

Name of the Examiners

1. PRATHIBHA. P. 2. ROHITH'S

Signatures with Date

Principal

Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Road,

Bangalore-560 057

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru- 560057 DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

This is to certify that Mr. Madusudhan Patil M, USN 1SG14LVS12 has satisfactorily completed the Project work entitled "Analysis of NoC Adapter and Wormhole Router Design and its FPGA Implementation" in partial fulfillment of the requirements as prescribed by the Visvesvaraya Technological University for 4th semester M. Tech. in VLSI Design and Embedded Systems during the year 2015-2016. It is certified that all corrections/suggestions indicated for internal assessment have been incorporated in the report deposited in the departmental library.

Suna VShiting Anderth

Prof. Suma V Shetty **Assistant Professor** Dept. of ECE, SCE

Name & Signature of Guide Hand & Signature of HOD Bedroft Sandhya Rani M H Polissociate Professor & HOD-1119 Principal Baffer SEGO 057

Name & Signature of Principal ¹Dr. Aswatha Kumar M

SCE Bergalurukumar. M Principal Sapthagiri Colloge of Engineering No. 14/5, Chikkasandra, Hesaraghtta Main Road, Bangalore-560 057 Signature with Date

External Viva

Name of the Examiners

1. Nagundre Kunner. M, SJCS-1, CKprd 5ml 2 Suur V Shith, SCE, Blone

Principal

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru- 560057 DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

This is to certify that Ms. KAVYA K, USN 1SG14LVS11 has satisfactorily completed the Project work entitled "ACCIDENT DETECTION AND INTELLIGENT NAVIGATION SYSTEM FOR EMERGENCY VEHICLES IN URBAN AREAS USING IOT" in partial fulfillment of the requirements as prescribed by the Visvesvaraya Technological University for 4th semester M. Tech. in VLSI Design and Embedded System during the year 2015-2016. It is certified that all corrections/suggestions indicated for internal assessment have been incorporated in the report deposited in the departmental library.

Name & Signature of Guide Dr. GEETHACR

Associate Professor Dept. of ECE

ectronic Professor & HOD,

Denagri College

angalor, 560 us/

Name & Signature & Principal Dr. ASWATHA KUMAR

Professor & Principal

Sapthagiri Colloge of Ergineering
No. 14/5, Chikkasandra,
Hesaraghtta Main Road,
Bangalore, 560,057 Bangalore-560 057

Signatures

Name of the Examiners

1. Dr. GEETHA Coll 2 Pradhaveethi Coll.

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru- 560057 DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

This is to certify that Ms. K. DEEPIKA, USN 1SG14LVS10 has satisfactorily completed the Project work entitled "FPGA IMPEMENTATION OF AN EFFICIENT DIGITAL WATERMARKING USING INTEGER WAVELET TRANSFORM AND HISTOGRAM TECHNIQUE" in partial fulfillment of the requirements as prescribed by the Visvesvaraya Technological University for 4th semester M. Tech. in VLSI Design and Embedded System during the year 2015-2016. It is certified that all corrections/suggestions indicated for internal assessment have been incorporated in the report deposited in the departmental library.

Signature of Guide Prof. Sudha M. S. Assistant Professor. Dept. of ECE

History the Webartment Electron Sandhya Rani M. H. H. Associate Professor & HOD. Sapinagin Compage of Engineering

Bangalor 560 057. >

External Viva

Signature of Principal Dr. Aswatha Kumar Professor & Principal

SCEABER INTUKUMAR. M Principal Sapthagiri Colloge of Engineering No. 14/5, Chikkasandra, Hesaraghtta Main Road, Bangalore-560 057

Signature with Date

Name of the Examiners

1. Sudha. M.s 2. 13aby H.T.

Principal

Sapthagiri College of Engineering Chikkasan 'a Hosaraghatta Road,

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru- 560057 DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

This is to certify that Ms. JAMUNA H G., USN 1SG14LVS09 has satisfactorily completed the Project work entitled "IMPLEMENTATION OF SMARTER GRID EMBEDDED IN AN IOT PLATFORM" in partial fulfillment of the requirements as prescribed by the Visvesvaraya Technological University for 4th semester M. Tech. in VLSI Design and Embedded System during the year 2015-2016. It is certified that all corrections suggestions indicated for internal assessment have been incorporated in the report deposited in the departmental library.

Signature of Guide Prof. SHOBHA HUGAR Assistant Professor Dept. of ECE

Signature of HOD Prof. SANDHYA RANI M. H. Associate Professor & HOD, Dept. of ECE

Name of the Examiners

Principal
Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

Principal

P Bangalore-560 057

Signature of Principal Dr. ASWATHA KUMAR M. Professor & Principal

SCE, Berigathfrit atha Kumar. Senganiti atria Rumar.

Principal

Sapthagiri Colloge of Engineeri

No. 14/5. Chikkasandra,

Hesaraghtta Mair Road

Signatures ngalore-560 057

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru- 560057 DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

This is to certify that Mr. DINESH M.D., USN 1SG14LVS07 has satisfactorily completed the Project work entitled "Design and Implementation of an Intelligent Embedded Based Low Cost System for Conservation of Power in Offices" in partial fulfillment of the requirements as prescribed by the Visvesvaraya Technological University for 4th semester M. Tech. in VLSI Design and Embedded System during the year 2015-2016. It is certified that all corrections/suggestions indicated for internal assessment have been incorporated in the report deposited in the departmental library.

Same & Signature of Guide Prof. RAVISHANKARA M.N. **Associate Professor**

Markow

Dept. of ECE

Sapporting No. 14 fund balkasandra, Hesangonia Main Road,

External viva

BanquiofE660 057.

of the Examiners

NAGARAJ 8.

RAVISHANKARA MIN

Signature with date

Chikkasandra, Hesaraghatta Main Road, Bengaluru- 560057 DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

This is to certify that Mr. DILIP B G, USN1SG14LVS06 has satisfactorily completed the Project workentitled "An Efficient Architecture for Range Enhanced Packet Classification and its FPGA Implementation" in partial fulfillment of the requirements as prescribed by the Visvesvaraya Technological University for 4th semester M. Tech. in VLSI Design and Embedded System during the year 2015-2016. It is certified that all corrections/suggestions indicated for internal assessment have been incorporated in the report deposited in the departmental library.

Name & Signature of Guide Prof. Sasmita Mohapatra Associate Professor, Dept. of ECE

Head of the Department Name & Signature of HOD Name & Signature of HOD Carronics & Communications Name & Signature of HOD.

Name & Signature of HOD.

Pectronics & Communication. Asymptographic of Engineering of Sandhya Rani M. H.

Prof. Sandhya Rani M. H.

Anthachter Colors of Engineering of Engine Dept. Brancalor, 560 057.

External Viva

Name of the Examiners

1. Sasméta Mohapatra 2 P. Pohranesevai

Signature with Date

Principal

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru- 560057
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

This is to certify that Ms. DEEPTI H BAGALI, USN 1SG14LVS05 has satisfactorily completed the Project work entitled "Design and Development of DTCWT based Automated Big-marker Detection and Classification for Epilepsy" in partial fulfillment of the requirements as prescribed by the Visvesvaraya Technological University for 4th semester M. Tech. in VLSI Design and Embedded System during the year 2015-2016. It is certified that all corrections/suggestions indicated for internal assessment have been incorporated in the report deposited in the departmental library.

Time & Signature of Guide

Prof. SHOBHA S
Associate Professor
Dept. of ECE

Name & Signature of HOD Prof. SANDHYA RANI M H. Associate Professor & HOD, Dept. of ECE

Name & Signature of Principal Dr. Aswatha Kumar Professor & Principal SCE, Bengaluru

Dr. Aswatha Kumar M Princ pal

Sapthagiri Colloge of Engineering No. 14/5, Chikkasandra, HesaraStgtatuets Road, Bangalore-560 057

e of the Examiners

K. E. W. Zinn

29/7/IC Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Road,

Bangalore-560 057

Principal

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru- 560057 DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

This is to certify that Ms. CHAITRA P., USN 1SG14LVS04 has satisfactorily completed the Project work entitled "FPGA IMPLEMENTATION OF IMAGE ENHANCEMENT ALGORITHM USING ARTIFICIAL NEURAL NETWORK AND FUZZY LOGIC" in partial fulfillment of the requirements as prescribed by the Visvesvaraya Technological University for 4th semester M. Tech. in VLSI Design and Embedded System during the year 2015-2016. It is certified that all corrections/suggestions indicated for internal assessment have been incorporated in the report deposited in the departmental library.

Signature of Guide

Mrs. Agalya P. Associate Professor, Dept. of ECE

Head of the Department Dr. Aswallia Kinglar Professor Hod Rolling Sapinagiri College of Fine ening Riverses Children and Chi Sapthagiri one ege of Engineering

Bangaior: 560 057.

Signature of Principalar. M Sepandarulair Road, Bangalore-560 057

External Viva

Name of the Examiners

Signature with Date

Principal

Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Road.

Bangalore-560 057

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru- 560057 DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

This is to certify that Ms. BRIGHTY LICY PIOUS, USN 1SG14LVS03 has satisfactorily completed the Project work entitled "DESIGN OF DTCWT BASED ALGORITHM FOR AUTOMATED EEG BIOMARKER DETECTION CLASSIFICATION OF ALS" in partial fulfillment of the requirements as prescribed by the Visvesvarava Technological University for 4th semester M. Tech. in VLSI Design and Embedded System during the year 2015-2016. It is certified that all corrections/suggestions indicated for internal assessment have been incorporated in the report deposited in the departmental library.

Name & Signature of Guide Prof. Satish Murthy Associate Professor

Dept. of ECE

Hand of the Department.

Name & Signature of HOD

Plame & Signature of Principal

Flerof. Sandhya Rani M. H.

Sassociate Professor & Hop

Florofessor & Principal

Florofessor & Bengallerial

SCE, Bengallerial

Mame & Signature of Principal

Sapthagiri Colloge of Engireering No. 14/5, Chikkasandra, Hesaraghtta Main Road, Bangalore-560 057

Name of the Examiners

2 Dr. Cyril Prasanna

Signatures

Soring-Lyryn 16/8/16

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru- 560057 DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

This is to certify that Ms. BINDUSHREE A, USN 1SG14LVS02 has satisfactorily completed the Project work entitled "DESIGN AND IMPLEMENTATION OF OBJECT TRACKING IN VIDEO USING PARTICLE FILTER ALGORITHM ON FPGA FRAMEWORK" in partial fulfillment of the requirements as prescribed by the Visvesvaraya Technological University for 4th semester M. Tech. in VLSI Design and Embedded System uring the year 2015-2016. It is certified that all corrections/suggestions indicated for internal essessment have been incorporated in the report deposited in the departmental library.

ASWATHA KUMAR MEJ Principal

Dept. of ECE

Signature of Principal Dr. ASWATHA KUMAR M ANDHIA RAME HOD, tiorprincipal atte Professor & HOD, tiorprincipal

Magin College of EngineeringsCE, Bengaluru Kumar. M Bangaior, 560 057. Principal Sapthagiri Colloge of Engineering

External Viva

No. 14/5, Chikkasandra, Hesaraghtta Main Road, Bangalore-560 057

Olethan

Name of the Examiners

DE ASWATHA KUMARM

= Prof. MALCHANGERIAY

Signature with date

Principal Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Road,

Bangalore-580 057

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru- 560057 DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

This is to certify that Mr. Ajeeth, USN 1SG14LVS01, has satisfactorily completed the Project work entitled "IoT Based Security System for Industries Using Raspberry Pi" in partial fulfillment of the requirements as prescribed by the Visvesvaraya Technological University for 4th semester M. Tech. in VLSI Design and Embedded Systems during the year 2015-2016. It is certified that all corrections/suggestions indicated for internal assessment have been incorporated in the report deposited in the departmental library.

20/08/2016 Name & Signature of Guide

Name & Signature of HOD Prof. Sandhya Rani M H Associate Professor & HOD Name & Signature of Principal Dr. Aswatha Kumar M

Principalwatha Kumar. M

Prof. Sandhya Rani M H Associate Professor & HOD Associate Professor & The Depart Sent Bengalure pal Associate Professor & HOD Associate Professor & HOD Associate Professor & The Depart Sent Bengalure pal Dept. of ECE, SCE Communication Electronics & Communication Electronics & Communication Research Hesaraghtta Main Road Santhagiri College of Engineering Santhagirial Mirage of Engineering galore-560 057

Bangalor -560 057. Bangalor 560 057.

Name of the Examiners

Signature with Date

1. Sandhya Rami M. H.

2. H. venketech Kuriar

20016

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-560057 DEPARTMENT OF ELECTRONICS AND COMMUNICATION **ENGINEERING**



CERTIFICATE

This is to certify that PRADEEP M K (1SG13LVS18) has satisfactorily completed work entitled "Implementation of Embedded Remotely Controlled Intelligent Street System", in partial fulfillment of the requirements as prescribed by the Visveswaraya University for IV semester, Master of Technology in VLSI Design and Embedded the year 2016-17. It is certified that all corrections/suggestions indicated for internal been incorporated in the report deposited in the department library.

of the Guide

P. Agalya Sivakumar

Professor

EL OF ECE

Signature of HOD

andry

Mrs. Sandhya Rani M H

Associate Professor & HOD

ADopt of ECE Department

Electronics & Communication,

Sapthagiri Contigo of Engineering

Bandaternal Viva

Signature of the Principal

Dr. Aswatha Kumar M

Dr. Aswatha Kumar. M Principal

Sapthagiri Colloge of Engineering NSCE/Bechildersandra, Hesaraghita Main Road, Bangalore-560 057

Signature

Tame of the Examinar

Principal

. Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Road,

Barnstore-560 057

SAPTHAGIRI COLLEGE OF ENGINEERING 14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru- 560057

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

Certified that the project work entitled "DESIGN AND IMPLEMENTATION OF AN EFFICIENT MAJORITY LOGIC FAULT DETECTOR/DECODER" carried out by Mrs. KAVYA B. S., USN 1SG13LVS17, a bonafide student of Sapthagiri College of Engineering in partial fulfillment for the award of Master of Technology in VLSI Design and Embedded Systems of the Visvesvaraya Technological University, Belagavi during the year 2014-15. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the said Degree.

andrett

131	
	16/06/15
Signature of the Gu	ide Head of the HOD
Mrs. B. N. SHOBHA	ElectroiMrs, SANDHYA RANI M.H.
Associate Professor	Santhac Associate Professor & HOD
Dept. of ECE	ide Head of the HOD Electroimes SANDHYA RANI M.H. Sapthagassociate Professor & HOD Bartyalor 560 057

Signature of the Principal

Dr. ASWATHA KUMAR M. Principal

SCE, Bengaluru

Dr. Aswatha Kumar. M

Principal
Sapthagiri College of Engineering
No. 14/5, Chikkasandra,
Hesaraghatta Mairi Road,
Bangalore - 560 057.

Signature with date

Name of the examiners

B. M. Shall 12/10/15

B. N. SHOBITA

Principal

External Viva

B. n. Shorts

Sapthagiri College of Engineering

Dr. Vijaya Porkash, AMangalore-560 057

19-1 26/08/15

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru- 560057 DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

Certified that the project work entitled " Design and Implementation of Unique Video Oculographic Algorithm Using Real Time Video Processing on FPGA " carried out by KARTHK K.P., USN 1SG13LVS16, a bonafide student of Sapthagiri College of Engineering in partial fulfillment for the award of Master of Technology in VLSI Design and Embedded Systems of the Visvesvaraya Technological University, Belagavi during the year 2014-2015. It is certified that all corrections/suggestions indicated for internal assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of project work prescribed for the said degree.

Signature of the Guide Mr. BASAVARAJU S. Assistant Frofessor,

Dept. of ECE

Signature of the HOD

Signature of the Principal

Mrs. SANDHYA RANIMH Dr. ASWATHA KUMAR M.
ASSEA CONTROL OF COMMUNICATION CE, Bengaluru Principal

Sapthagiri College of Engineering Bangalore 560 057.

Sapthagiri College of Engineering No. 14/5, Chikkasandra, Hesaraghatta Main Road Bangalore -560 057.

External Viva

Name of the Examiners

2) Jagedier B'Carach

Signature with Date

Borne will

BENGALURU-560057

(Affiliated to Visvesvaraya Technological University, Belagavi, Karnataka)

THE PARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

This is to certify that YESHVANTH H J, USN 1SG13LVS15, a bonafide student of Sapthagiri College of Engineering has satisfactorily completed the project titled "Design, Development and FPGA Implementation of Algorithms for Whitefly Pest Detection in Plants" in partial fulfillment of the requirements as prescribed by the VTU for 4th semester. Master of Technology in "VLSI DESIGN & EMBEDDED SYSTEMS" and submitted the report during the academic year 2014-15. It is certified that all corrections/suggestions indicated for internal assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of project work prescribed for the said degree.

13/06/2011

Signature of the Guide Mrs. B.N. Shobha Associate. Prof. Dept. of ECE

Mrs. Sandhya Rani M.H. Head of the Department
Associate Prof & Hobient
Electronics & Communication
Dept of ECE
Sapthagir College of Engineering

Bangalore 560 057.

External viva

Signature of Principal

Mary

Dr. Aswatha Kumar M

Dr. Aswatha Kuma SCE, Berrahinal
Sapthagiri College of Engineerin
No. 14/5, Chikkasandra,
Hesaraghatta Main Road,
Bangalore - 560 057.

Signature with Date

Name of the Examiners

2.

SAPTHAGIRI COLLEGE OF ENGINEERING ** Charachara, Hesaraghatta Main Road, Bengaluru- 560057

OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

"DESIGN entitled work project Certified that DELEMENTATION OF LOW POWER HYBRID TYPE TCAM USING PARALLEL PAI-SIGMA MATCH-LINE SENSING SCHEME" carried out by Yashaswini H. G., USN 1SG13LVS14, a bonafide student of Sapthagiri College of Engineering in partial fulfillment for the award of Master of Technology in VLSI Design and Embedded Systems of the Visvesvaraya Technological University, Belagavi during the year 2014-15. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in Export deposited in the departmental library. The project report has been approved it satisfies the academic requirements in respect of Project work prescribed for the said Degree.

Signature of the HOD

Signature of the Principal

Signature of the Guide

Dr. ASWATHA KUMAR M.

Mrs. SANDHYA RANI M.H. Absociate Professor & HOD Dr. ASWATHA KUMAR M. Principal SCE, Bengaluru

Principal SCE, Bengaluru

1.

Electro Pert of ECE munication

Dr. Aswatha Kumar. M Principal

Dr. Aswatha Kuma Sapihagiri College of Engineering Principal Bangalor 560 057. Sapthagiri College of Engineering External Viva No. 14/5, Chikkasandra,

Sapthagiri College of Engineering No. 14/5, Chikkasandra, Hesaraghatta Main Road, Bangalore - 560 057.

Bangalore -560 057. Name of the examiners

Hesaraghatta Main Road,

Signature with date

Principal Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Road,

2. Dr. RAJESWARE

Bangalore-500 05

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

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

Certified that the project work entitled "DESIGN AND FPGA IMPLEMENTATION OF AN EFFICIENT ENHANCEMENT ALGORITHM FOR CONSUMER ELECTRONICS IMAGES" carried out by VARSHINI K., USN 1SG13LVS12, a bonafide dent of Sapthagiri College of Engineering in partial fulfillment for the award of Master of Technology in VLSI Design and Embedded Systems of the Visvesvaraya Technological Messity, Belagavi during the year 2014-2015. It is certified that all corrections/suggestions defor internal assessment have been incorporated in the report deposited in the Technological Internal library. The project report has been approved as it satisfies the academic corrections in respect of project work prescribed for the said degree.

to the

and the

17/06/2015

Signature of the Guide Mrs. AGALYA P.

Associate Professor, Dept. of ECE Signature of the HOD

Hurs Sandhdarania H.
Elecasses Series Professor & Hollon
Sapina Strict College of Engineering
Bangalor 560 057.

External Viva

Signature of the Principal

Dr. ASWATHA KUMAR M. Principal

SCFr. Bangalurtha Kumar. M Principal

Sapthagiri College of Engineering No. 14/5, Chikkasandra, Hesaraghatta Main Road, Bangalore - 560 057.

Signature with Date

Harter 31/08/11

31/8/15

Name of the Examiners

1) Dr. M. C. Hanumantharaju

2) P Agalya

5

SAPTHAGIRI COLLEGE OF ENGINEERING 14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru- 560057

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

"DESIGN AND Certified that the project work entitled NETWORK WITH **ON-CHIP** IMPLEMENTATION OF AN ADDRESSING SCHEME FOR PERMUTATION NETWORK" carried out by Umadevi R., USN 1SG13LVS11, a bonafide student of Sapthagiri College of Engineering in partial fulfillment for the award of Master of Technology in VLSI Design and Embedded Systems of the Visvesvaraya Technological University, Belagavi during the year 2014-15. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the said Degree.

and get Signature of the Guide

Signature of the Principal

Mrs. SANDHYA RANI M.H.

HEROSANDHYA DRANTMIRENT Associate Professor & HOD Associate Professor & HOD

Dr. ASWATHA KUMAR M. Frincipal

Dept. of ECE SCE, Bengaluru Saptha Dept of ECE Engineering Dr. ASWatha Kumar. M SCE Bengahur 057.

Sapthagiri College of Engineering No. 14/5, Chikkasandra, Hesaraghatta Main Road, Bangalore -560 057.

External Viva

Name of the examiners

Signature with date

1. Sandhyn Rani M-H. Principal
Sapthagiri College of Engineering

Chikkasandra, Hesaraghatta Road,
Bangalore-560 057

145, Chikkasandra, Hesaraghatta Main Road, Bengaluru- 560057 PARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

Certified that the project work entitled "DESIGN AND FPGA IMPLEMENTATION RELIABLE CRYPTOGRAPHIC SHA-3 ALGORITHM" carried out by TEJASWINI USN 1SG13LVS10, a bonafide student of Sapthagiri College of Engineering in partial ment for the award of Master of Technology in VLSI Design and Embedded Systems of Le Visvesvaraya Technological University, Belagavi during the year 2014-2015. It is certified all co-rections/suggestions indicated for internal assessment have been incorporated in the deposited in the departmental library. The project report has been approved as it satisfies e academic requirements in respect of project work prescribed for the said degree.

Signature of the Guide Mrs. SUDHA M.S. Assistant Professor, Dept. of ECE

Signature of the HOD

MES SANDHY DRANHMeht

Electronic Dept. of ECF
Sapthagiri College of Engineering. Aswaring Author. M
Principal
Principal

Bangalore 560 057.

Signature of the Principal Dr. ASWATHA KUMAR M.

Principal

No. 14/5, Chikkasandra, Hesaraghatta Main Road, Bangalore -560 057.

External Viva

Name of the Examiners 1) Sudha.ms

2) K. V. Pushpolath.

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru- 560057 DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

Certified that the project work entitled "FPGA IMPLEMENTATION FOR AUTOMATED CLASSIFICATION OF BREAST CANCER USING SUPPORT VECTOR MACHINES" carried out by Ms. Stuti Sharon, USN 1SG13LVS39, a bonafice student of Sapthagiri College of Engineering in partial fulfillment for the award of Master of Technology in VLSI Design and Embedded Systems of the Visvesvaraya Technological University, Belagavi during the year 2014-2015. It is certified that all corrections/suggestions indicated for internal assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of project work prescribed for the said degree.

ignature of the Guide

Mrs. VANI V. Assistant Professor, ECE SCE, Bengaluru

Signature of the HOI

Mrs. SANDHYA RANI M H. Assoc. Profite Hong Etnent CE. Bengalin Communication Dr. SCEWBengalwumar. M

External Viva

Signature of the Principal

Dr. ASWATHA KUMAR M. Principal

apthagiri College of Engineering Sapthagiri College of Engineering No. 14/5, Chikkasandra, Hesaraghatta Main Road, Bangalore - 560 057.

Name of the Examiners

1) Pr. si Va Yellampalli

2) Vani. V

Principal Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Road, Bangalore-560 057

Signature with Date

y8865-

Ahri. V 2018/15

BENGALURU-560057

(Affiliated to Visvesvaraya Technological University, Belagavi, Karnataka)

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

This is to certify that SHAMANTH R., USN 1SG13LVS07, a bonafide student of Sapthagiri College of Engineering has satisfactorily completed the project titled "Design, Development and FPGA Implementation of Chronic Liver Disease detection system" in partial fulfillment of the requirements as prescribed by the VTU for 4th semester. Master of Technology in "VLSI DESIGN & EMBEDDED SYSTEMS" and submitted the report during the academic year 2014-15. It is certified that all corrections/suggestions indicated for internal assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of project work prescribed for the said degree.

Signature of the Guide

Pobosper

Signature of HOD

Signature of Principal

Mrs. Sasmita Mohapatra

Mrs. Sandhya Rani M.H.

Dr. Aswatha Kumar M

Associate. Prof.

He Associate Motor Dr. As wating thumar. M

Dept. of ECE

Electron Dept of Economication Principal
Sapthagiri College of Engineering No. 14/5, Chikkasandra,
Hesaraghatta Mair Road,
Bangalore 560 057.

Bangalore 560 057.

External viva

Name of the Examiners

1. P. Shanth.

2. Sasmita Mohapatra

Signature with Date

SAPTHAGIRI COLLEGE OF ENGINEERING 14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru- 560057

PARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

Certified that the project work entitled "FPGA IMPLEMENTATION OF LEAST COMPLEX S-BOX FOR FAULT DETECTION" carried out by Mrs. N. SANDHYA, USN 1SG13LVS06, a bonafide student of Sapthagiri College of Engineering in partial fulfillment for the award of Master of Technology in VLSI Design and Embedded Systems of the Visvesvaraya Technological University, Belagavi during the year 2014-15. It is certified that all corrections/suggestions indicated for Internal Assessment zeve been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the said Degree.

Signature of the Guide

Dr. ASWATHA KUMAR M. **Frincipal**

SCE, Bengaluru Dr. Aswatha Kumar. M Principal Sapthagiri College of Engineering No. 14/5, Chikkasandra,

Hesaraghatta Main Road, Bangalors - 560 057.

Name of the examiners

Signature of the HOD

Mrs. SANDHYA RANI M.H.

Associate Professor & HOD Dept. of ECE

External Viva

Signature of the Principal

Dr. ASWATHA KUMAR M. Principal

SCE, Bengaluru

Dr. Aswatha Kumar. M Principal

Sapthagiri College of Engineering No. 14/5, Chikkasandra, Hesaraghatta Main Road, Bangalore - 560 157.

Signature with date

1. Dr. Aswath Kumar M.

2. Nataraju A & Principal Sapthagiri College of Engineering

Chikkasandra, Hesaraghatta Road, Bangalore-560 057

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru- 560057 DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

Certified that the project work entitled "Design and Implementation of Interleaver for WLAN Applications" carried out by PAVITHRA C., USN 1SG13LVS05, a bonafide student of Sapthagiri College of Engineering in partial fulfillment for the award commaster of Technology in VLSI Design and Embedded Systems of the Visvesvaraya Technological University, Belagavi during the year 2014-2015. It is certified that all corrections/suggestions indicated for internal assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of project work prescribed for the said degree.

All 1/16/5

Signature of the Guide

Mrs. SHOBHA S. Associate Professor, Dept. of ECE

MITESANDHYARANI MICHIE Elessociate Professor & Holoation Sapthagin et lege et Engineering Bangalor(560 057.

Signature of the HOD

External Viva

Signature of the Principal

Dr. ASWATHA KUMAR M. Principal, SCE. Bengaluru

Dr. Aswatha Kumar. M

Principal
Sapthagiri College of Engineering
No. 14/5, Chikkasandra, Hesaraghatta Main Road, Bangalore - 560 057. Signature with Date

Name of the Examiners 1) S SHOBUH

2) Dr. A. SHOBHA RANGpthagiri College of Engineering Chikkasandra, Hesaraghatta Road, Bangalore-560 057.

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru- 560057
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

Certified that the project work entitled "IMPLEMENTATION OF AN EFFICIENT LDPC DECODER USING MESSAGE PASSING ALGORITHM FOR POWER LINE COMMUNICATIONS" carried out by Ms. PALLAVI C., USN 1SG13LVS04, a bornafide student of Sapthagiri College of Engineering in partial fulfillment for the award of Master of Technology in VLSI Design and Embedded Systems of the Visvesvaraya Technological University. Belagavi during the year 2014-2015. It is certified that all corrections/suggestions indicated for internal assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of project work prescribed for the said degree.

Signature of the Guide Mrs. SHOBHA HUGAR Assistant Professor

Dept. of ECE

Signature of the HOD

Mrs. SANDHYA RANI M.H.

Associate Professor & HOD

Head Brither Department Electronics & Communication Sapthagiri College of Engineering Bangalor, 560 057, External Viva

Signature of the Principal Dr. ASWATHA KUMAR M. Principal

SCE, Bengaluru

Dr. Aswatha Kumar. N

Principal

Sapthagiri College of Engineering
No. 14/5, Chikkasandra,
Hesaraghatta Main Road,
Bangalore - 560 057.

(100) 000

Name of the Examiners

Signature with Date

2) Kondan

Jones 318/18

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-560057 DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

This is to certify that GANGADHARA SWAMY M S (1SG13LVS02) has satisfactorily completed the Project work entitled "Implementation of Hand Sign Interpreter Using Embedded Processor" in partial fulfillment of the requirements as prescribed by the Visveswaraya Technological University for IV semester, Master of Technology in VLSI Design and Embedded Sistems during the year 2016-17. It is certified that all corrections/suggestions indicated for internal assessment have been incorporated in the report deposited in the department library.

and entit

Signature of the Guide

Mrs. Sandhya Rani M H

Associate Professor & HOD

Dept of ECE, SCE

Signature of HOD

Mrs. Sandhya Rani M H

Associate Professor & HOI Head of the Department Dept of ECE, SCE Signature of the Principal

Dr. Aswatha Kumar M Dr. Aswatha Kumar. M Principalncipal
Sapthagiri Colloge of Engineering
Nac14/5, Chikkasandra,
Hesaragirita Walih Road, Bangalore-560 057

External Viv

Name of the Examinar

Principal

Principal

Sandhya Rami M.H. Sapthagiri College of Engineering

Chikkasandra, Hesaraghatta Road,
Bangalore-550.057

Signature

SAPTHAGIRI COLLEGE OF ENGINEERING 145, Chikkasandra, Hesaraghatta Main Road, Bengaluru- 560057

PARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

Certified that the project work entitled "FPGA IMPLEMENTATION OF SEPARABLE REVERSIBLE DATA HIDING OF AES ENCRYPTED DATA" carried out by Mrs. A. G. L. MANASA SREE N., USN 1SG13LVS01, a bonafide stucent of Sapthagiri College of Engineering in partial fulfillment for the award of Master of Technology in VLSI Design and Embedded Systems of the Visvesvaraya Technological University, Belagavi during the year 2014-15. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the said Degree.

Signature of the Guide

Mrs. GEETHA C.R. Assistant Professor Dept. of ECE

Signature of the H

Mrs. SANDHYA RANI M.H.

Headinfetholessparther ElectroniofECECommunication OE, Assignativa Kumar. M

Signature of the Principal

Dr. Aswatha Kumar M.

Principal

Sapthagiri College of Engineering
Bangalore 560 007
External Viva

Sapthagiri College of Engineering
No. 14/5, Chikkasandra,
Hesaraghatta Main Road,
Bangalore -560 057.

Name of the examiners

Prihcipal

1 GEETHA C. Sapthagiri College of Engineering Chikkasandra, Hesaraghatta Road,

2. G. PARIMALA GANDAI Bangalore-560 057

Signature with date