# SAPTHAGIRI COLLEGE OF ENGINEERING

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

## Department of Computer Science and Engineering

# Certificate



Certified that the project work entitled **"ESTIMATION AND DE-IDENTIFICATION OF GENDER SIGNATURE FROM FINGERPRINTS"** carried out by **AKSHATHA HEBBAR (1SG11CS006), ANUSHA M (1SG11CS012), CHANDAN N (ISG11CS019), MALLIKARJUNA K R (1SG11CS039)**, bonafide students of **this institute**, in partial fulfillment for the award of **Bachelor of Engineering** in **Computer Science and Engineering** of **Visvesvaraya Technological University, Belgaum** during the academic year **2014-15.** It is certified that all corrections/suggestions indicated for internal assessment have been incorporated in the report deposited in the department library. This 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 26|5|15

Signature of the HOD 29|5|15

Signature of the Principal

**Mrs. Kamalakshi Naganna**

**Dr.C.M.Prashanth**

**Dr.Aswatha Kumar M**

Associate Professor

Professor & Head

Principal

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

**Name of the Examiners**

Signature with date

1.........................

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2.........................

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# ABSTRACT

A fingerprint in its narrow sense is an impression left by the friction ridges of a human finger. Fingerprints are easily deposited on suitable surfaces such as glass, metal or polished stone by the natural secretions of sweat from the eccrine glands that are present in epidermal ridges. The need of sharing fingerprint image data in many emerging applications raises concerns about the protection of privacy. It has become possible to use automated algorithms for inferring soft biometrics from fingerprint images. Even if we cannot uniquely match the person to an existing fingerprint, revealing their gender may lead to undesirable consequences.

De-identification is a technique which is enforced to remove data pertaining to personal information such as gender. This project focuses on de-identifying fingerprint images in order to obfuscate soft biometrics.

# Karnataka State Council for Science and Technology

### Indian Institute of Science Campus, Bangalore – 560 012

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**Dr. S. G. Sreekanteswara Swamy**
*Fellow & Principal Investigator - SPP*

12th March 2015

Ref: 7.1.03/SPP/1018

The Principal
Sapthagiri College Of Engineering
14/5, Chickasandra, Hesaraghatta Main Road
Bangalore – 560 057.

Dear Sir,

Sub : Sanction of Student Project - 38th Series, Year 2014-2015
**Your Project Proposal Reference No. : 38S0913**
Ref : Your Project Proposal entitled " **ESTIMATION AND DE-IDENTIFICATION OF GENDER SIGNATURE FROM FINGERPRINTS**

I am happy to inform that your project proposal referred above, has been approved by the Secretary, KSCST for "Student Project Programme - 38th Series" and has been sanctioned with a budgetary break-up as detailed below:

| Student / s | Mr. Chandan N and others | Budget | Amount (Rs) |
|---|---|---|---|
| | | Materials/Consumables | 2,000.00 |
| Guide/s | Prof. Kamalakshi Naganna | Labor | |
| | | Travel | |
| Department | Computer Science And Engineering | Miscellaneous | 500.00 |
| | | Report | 500.00 |
| | | **TOTAL** | 3,000.00 |
| **Rupees** | THREE THOUSAND | ZERO HUNDRED | |

The following are the guidelines to carryout the project work :

a) The project should be performed based on the objectives of the proposal sent by you.

b) The project should be completed in all respects and one copy of the hardbound report along with softcopy of the full report in a CD (.pdf format) should be submitted to KSCST.

c) Any change in the project title and objectives, etc., or students is liable to rejection of the project and the amount sanctioned needs to be returned to KSCST.

d) Please quote your **project sanction reference number printed above** in all your future correspondences.

e) **Important:** After completing the project, 2 to 3 page write-up (synopsis) needs to be sent by e-mail [spp@kscst.iisc.ernet.in] and should include following :

1) Title of the project
2) Name of the College & Department
3) Name of the students & Guide(s)
4) Keywords

5) Introduction / background

(with specific reference to the project, work done earlier, etc) - about 20 lines

6) Objectives (about 10 lines)

7) Methodology (about 20 lines)

(materials, methods, details of work carried out, including drawings, diagrams etc)

8) Results and Conclusions

(about 20 lines with specific reference to work carried out)

9) Scope for future work (about 20 lines).

(Note: The write-up (Synopsis) should be sent with the approval of project. The softcopy of the write-up, in MS Word format, should be sent by e-mail (spp@kscst.iisc.ernet.in). In your e-mail, please also include project propos reference number and title of the project.)

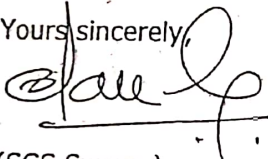e) Projects selected for Seminar / Exhibition will be awarded.

The sanctioned amount will be sent separately by our Accounts Department.

**The sponsored projects evaluation will be held in the Nodal Centre and the deta the nodal centre will be intimated shortly.**

Please visit our website for further announcements / information and for any clarification email to spp@kscst.iisc.ernet.in

Thanking you and with best regards,

Yours sincerely,

(SGS Swamy)

Copy to:

1) The Head of the Department of
   Computer Science And Engineering
   Sapthagiri College Of Engineering
   14/5, Chickasandra, Hesaraghatta Main Road
   Bangalore – 560 057.

2) Prof. Kamalakshi Naganna
   Department of Computer Science And Engineering
   Sapthagiri College Of Engineering
   14/5, Chickasandra, Hesaraghatta Main Road
   Bangalore – 560 057.

3) The Finance Officer, KSCST, Bangalore