



# 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, Hesaraighatta 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
		<b>TOTAL</b>	<b>3,000.00</b>
Rupees	<b>THREE THOUSAND</b>	<b>ZERO HUNDRED</b>	

The following are the guidelines to carryout the project work :

- The project should be performed based on the objectives of the proposal sent by you.
- 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.
- 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.
- Please quote your **project sanction reference number printed above** in all your future correspondences.
- 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 :
  - Title of the project
  - Name of the College & Department
  - Name of the students & Guide(s)

*[Signature]*  
Principal  
Sapthagiri College of Engineering  
Chickasandra, Hesaraighatta Road,  
Bangalore-560 057

38S0913

- 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 guide. 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 proposal reference number and title of the project.)**

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

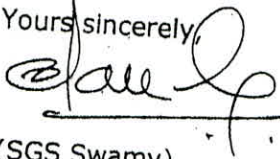
The sanctioned amount will be sent separately by our Accounts Department.

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

Please visit our website for further announcements / information and for any clarifications please 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



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



Project proposal ref no.38S0913

**“ESTIMATION AND DE-IDENTIFICATION  
OF  
GENDER SIGNATURE FROM FINGERPRINTS”**

NAME OF THE COLLEGE AND DEPARTMENT

**SAPTHAGIRI COLLEGE OF ENGINEERING  
DEPARTMENT OF COMPUTER SCIENCE AND ENGG**

NAME OF STUDENTS AND GUIDE


**AKSHATHA HEBBAR(1SG11CS006)  
ANUSHA M(1SG11CS012)  
CHANDAN N(1SG11CS019)  
MALLIKARJUNA K R (1SG11CS039)**


UNDER THE GUIDANCE OF

**MRS KAMALAKSHI NAGANNA**  
Associate Professor

KEYWORDS

LBP-Local Binary Pattern.  
LPQ-Local Phase Quantization.  
DFT-Discrete Fourier Transform.

  
Signature of the Guide

  
MRS KAMALAKSHI NAGANNA  
Associate Professor

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

# INTRODUCTION

The soft biometrics exist for identification of individual , research is carried out for extraction of gender from the fingerprint .From this privacy of individual is preserved. The identification of fingerprint has three phases,Initially Local Binary Pattern which obtain the image as a texture which is given as an input to LPQ (Local Phase Quantization). LPQ is used to obtain phase information of the image. These are the features obtained in soft biometrics.

De-Identification is a required element of information integration in order to reduce the risks of unauthorized disclosure. The implicit goal of de-identification is to protect privacy and preserve data utility. In de-identification, data content may be altered to remove or obscure personal information which would allow identification of an individuals who are the source of data. Image de-identification refers to the process of depriving the biometric data of information which would be useful to identify the source of data. In many real world applications, de-identification allows to release of data without sensitive information.

The obtained De-Identified image is matched across the original image and obtain sufficient matching performance.



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

## OBJECTIVES

- Achieving privacy protection on fingerprint image , where the need of sharing the data in many emerging application is important.
- Extracting the features of soft bio-metrics from given fingerprint image uses efficient De-Identification algorithm.
- Release the researched data of fingerprint image in such a way that it should disallow the successful extraction of soft bio-metrics.
- This proposes a method for reducing the ability to estimate the gender from the de-Identified fingerprint image, without compromising the correctness of the matching operation.

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



SCE-2014-15

Payment Voucher

No. : 890

Dated : 16-Jul-2015

Through : TGM-103091002852

Particulars	Amount
Account : KSCST( Project Work)	3,000.00
On Account of : Being expenses incurred towards KSCCT Project work	
Bank Transaction Details: Akshatha Hebbar Cheque	16-Jul-2015 3,000.00

SAPTHAGIRI COLLEGE OF ENGINEERING  
TGM BANK A/C NO: 202741001307  
Chq No. 81090.7 Date 18/7/15 Rs. 3,000/-  
Prepared by: [Signature] Verified by: [Signature] Authorized Signatory: [Signature]

Amount (in words):  
INR Three Thousand Only

₹ 3,000.00

Receiver's Signature: [Signature]

Authorised Signatory: [Signature]

Checked by: [Signature]  
1817

Verified by: [Signature]

11-8-15

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



23/06/2015

The principal,  
Sapthagiri College of Engineering  
Chikkasandra  
Bangalore - 57

To  
Prin. Shobha  
to release KSCST approved  
fund  
23/06/15

Dear Sir,

Subject: Reimbursement of funds granted by KSCST to  
SB AC/NO: "1199101022705"

, Chandon. N (1SG11CS019) a student of your college,  
writing this letter to collect reimbursement of fund  
on behalf of my friends AKshatha Hebbar (1SG11CS000)  
Anusha N (1SG11CS012), molikarjuna KR (1SG11CS039)  
were selected for the student project program  
Organized by KSCST for which they received a grant  
to carry out the project. I have attached the  
receipt of the expenditure along with this letter.  
I kindly request you to reimburse the amount of Rs  
SB AC/NO "1199101022705" (CANARA BANK).

The Expenditure is summarized in the table below.

Forwarded to Principal for needful.

Rys 2000  
23/06/15  
HOD, CS4E

Thanking you,

Sl. No	Item	No	Amount
1	Equipment	1	2500
2	Report	1	500
Total			Rs: 3000

needed to principal  
Sapthagiri College of Engineering  
Chikkasandra, Hesarahatta Road,  
Bangalore-560 047

CASH BILL Mobile :8892130893

# EHA PRINTS

Engineering College, Hanumanthe Gowda Main Road,  
Chikkasandra, Bangalore - 560 057.

38  
hondan.N Date. 20/5/15

Description	Qty.	Amount
-------------	------	--------

epot	1	500/-
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NEHA PRINTS

25/6/15 For NEHA PRINTS

Bought of

Cash/Credit Memo

Ganapathi Jayaram Peenya 3rd Floor  
BANGALORE - 560 058

Sold to Chondan.N

No 37

Date. 15/2/15

QNTY	PARTICULARS	RATE	AMOUNT Rs. P
1	Biometric finger print scanner	1	2500.00

25/6/15

Thank You!

Total 2500/-

Goods once sold will not be taken back

Style

Signature

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