Karnataka State Council for Science and Technology

Indian Institute of Science Campus, Bengaluru - 560 012

CST

Telephone: 080-23341652, 23348848, 23348849 ♦ Telefax: 080-23348840

Email: office@kscst.iisc.ernet.in, office@kscst.org.in ♦ Website: www.kscst.iisc.ernet.in, www.kscst.org.in

Dr. S. G. Sreekanteswara Swamy
Executive Secretary

28th March 2018

Ref: 7.1.01/SPP/08

The Principal,
Alva's Institute of Engineering and Technology,
Shobavana Campus,
Mijar,
Moodbidri - 574 225.

Dear Sir,

Sub : Sanction of Student Project - 41st Series: Year 2017-2018
Your Project Proposal Reference No. : 41S_BE_0943

Ref : Your Project Proposal entitled " **ACOUSTIC EVENT RECOGNITION FOR SURVEILLANCE SYSTEM**

I am happy to inform that your project proposal referred above, has been approved by the Secretary, KSCST for "Student Project Programme - 41st Series" and has been sanctioned with a budgetary break-up as detailed below:

Student / s	Ms. Vandana Shree J S and others	**Budget**	**Amount (Rs)**
		Materials/Consumables	3,000.00
Guide/s	Mr. Aneesh Jain M V	Labor	-
		Travel	500.00
Department	Electronics And Communication Engineering	Miscellaneous	500.00
		Report	500.00
		TOTAL	4,500.00
	RUPEES FOUR THOUSAND FIVE 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

6) Introduction / background 41S_BE_0943

(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 by e-mail / Website announcement.

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,

(S.G.S. Swamy)

Copy to:

1) The Head of the Department of
Electronics And Communication Engineering
Alva'S Institute Of Engineering And Technology,
Shobavana Campus,
Mijar,
Moodbidri - 574 225.

2) Mr. Aneesh Jain M V
Department of Electronics And Communication Engineering
Alva'S Institute Of Engineering And Technology,
Shobavana Campus,
Mijar,
Moodbidri - 574 225.

3) The Finance Officer, KSCST, Bangalore

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"JnanaSangama" Belagavi – 590 010

PROJECT REPORT
ON
"ACOUSTIC EVENT RECOGNITION FOR THE APPLLICATION OF SURVELLIANCE SYSTEM"

Submitted in partial fulfillment of the requirements for the award of the degree

BACHELOR OF ENGINEERING
IN
ELECTRONICS & COMMUNICATION ENGINEERING

Submitted By

Name	USN
SOUJANYA H N	4AL14EC082
SUPRIYA A M	4AL14EC089
VANDANA SHREE J S	4AL14EC094
MANJUNATH B A	4AL15EC412

Under the Guidance of
Mr. Aneesh Jain M V
Assistant Professor
Department of E&C Engineering

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI – 574 225.

2017-2018

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI – 574 225

(Affiliated to VTU, Belagavi)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CERTIFICATE

Certified that the project work entitled "**ACOUSTIC EVENT RECOGNITION FOR THE APPLICATION OF SURVELLIANCE SYSTEM**" is a bonafied work carried out by

SOUJANYA H N	**4AL14EC082**
SUPRIYA A M	**4AL14EC089**
VANDANA SHREE J S	**4AL14EC094**
MANJUNATH B A	**4AL15EC412**

in partial fulfillment for the award of BACHELOR of ENGINEERING in **ELECTRONICS & COMMUNICATION ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2017–2018. 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 Bachelor of Engineering degree.

22/5/18	D.V.T 22.05.18	
Signature of the Guide	**Signature of the H.O.D**	**Signature of the Principal**
Mr. Aneesh Jain M V	**Dr. D.V. Manjunathmunication**	**Dr. Peter Fernandes**
	Dept. of Electronics & Technology Alva's Institute of Engg. & Technology Mijar, MOODBIDRI - 574 225	PRINCIPAL Alva's Institute of Engg. & Technology, Mijar, MOODBIDRI - 574 225, D.K.

EXTERNAL VIVA

Name of the Examiners

Signature with date

1.....

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2.....

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ABSTRACT

Recent years have witnessed growing interest in the automatic detection of serious situations like road accidents, to ensure quick intervention of the emergency teams. However, in few scenarios visual data is not sufficiently reliable. In this proposed system audio event recognition (AER) technique is implemented through the analysis of audio streams which can improve the overall efficiency of the existing surveillance system.

Acoustic Event Recognition deals with detection, classification and recognition of unstructured environment which may contain overlapping sound events and non-stationary noises in the background. The events are classified by comparing the features extracted from the input sample with the trained samples. This work proposes a recognition scheme based on a hierarchical structure, using features obtained from Mel-Frequency Cepstral Coefficient (MFCC) and Perceptual Linear Prediction (PLP) methods. These features are used to train Support Vector Machine (SVM) for event classification. The effectiveness of the proposed method is demonstrated via experimental results using Matlab simulation tool.