







Visvesvaraya Technological University
“JnanaSangama”
Belagavi: 590018
Karnataka, India.
Tele: 0831-2498225 ,2405454

VTU Sponsored Student Project Proposal Format

01	Academic Year :	2020 - 2021	
02	Semester :	VIII	
03	Name of the College :	SRI SAIRAM COLLEGE OF ENGINEERING	
04	Branch:	EEE	
05	Project Title:	IDENTIFICATION OF FRUIT DISEASES THROUGH IMAGE PROCESSING.	
06	Project Discipline:	Embedded Systems	
07	Principal	Name:	Dr B. SHADAKSHARAPPA
		Contact No:	9448480620
		Email id:	principal@sairamce.edu.in
08	HOD	Name:	Prof. Malini K V
		Contact No:	9902748006
		Email id:	hod.eee@sairamce.edu.in
09	Project Guide	Name:	Madhava Rao.J
		Contact No:	9449570090
		Email id:	madhava.eee@sairamce.edu.in
10	Project Co-Guide(If any)	Name:	Prof. Malini K V
		Contact No:	9902748006
		Email id:	hod.eee@sairamce.edu.in
11	Project Committee coordinator (Identified by the college) :	Name:	Prof. Harish Babu
		Contact No:	9036527118
		Email id:	harishbabu.mech@sairamce.edu.in

12	Name of project group Members	
	1.Group leader and Member	
	Name: AMANAGARWAL	
	USN No. :1SB17EE004	
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	Email id:sce17ee020@sairamtap.edu.in	
	2.Member	
	Name: AMBRESH.	
	USN No. : 1SB17EE005	
	Contact No:9986597777	
	Email id: sce17ee015@sairamtap.edu.in	
	3.Member	
	Name: ADARSHA K	
	USN No. : 1SB17EE003	
	Contact No: 9739389744	
	Email id: sce17ee032@sairamtap.edu.in	
	4.Member	
	Name: SHIVANANDANSINGH	
	USN No. : 1SB17EE028	
	Contact No: 7004433955	
	Email id: sce17ee036@sairamtap.edu.in	
13	Scope / Objectives of the project:	<p>1.Fruit Industry is the largest industry of India.</p> <p>2.Due to lack of maintenance, inappropriate manual inspection the fruit Disease causes huge losses in yield, quality and quantity.</p> <p>3.Manual inspection is tedious and time consuming process. An image processing approach is proposed for apple fruit disease identification and categorization using different color, texture and shape feature combination.</p> <p>4.The basic steps of the proposed approach are image segmentation, extraction of features (color, texture and shape), feature combination and finally apple disease identified and classified using multi-class support vector machine into diseased or</p>

		normal class. 5. Our proposed technique experimentally verified and validated. 6. The accuracy of the proposed approach is achieved up to 96%.
14	Methodology of work: (Including diagram, flow chart and design calculations)	1. The K means clustering algorithm performs segmentation by minimizing the sum of squares of distance between the image intensities and the cluster centroids. 2. K-means clustering algorithm, or Lloyd’s algorithm, is an iterative algorithm that partitions the data and assigns n observations to precisely one of k clusters defined by centroids.
15	Expected Outcome of the project:	1. Fruit plants are mostly infected by the disease named bacterial blight. To tackle these kind of disease the image of the blur image taken and it is fed to the future system. 2. For early stage detection. 3. Single valued analysis etc. For the cost effective steps in the future. 4. We will work on the SCD approach to analyze the disease in fruits in the prior stage.
16	Application of the project :	Analyze the agriculture data in a better way to reduce the hoardings and in bringing up a prosperous safe and peaceful farmer society.
17	Budget details with Materials required:	<p>Hardware Requirements: Computer – Processor, high speed is preferred. 64 – bit RAM 4GB Hard disk – Free space of 5GB Laptop built-in Camera</p> <p>Software’s Used: Python 3.7 Open CV tool OS – Windows 8 / 10, 64 – bit. Python (IDLE or ANACONDA) Rasberry Pi</p>
		Hardware components
		7000.00

		Software components	5000.00	
		Report and Binding	1500.00	
		Miscellaneous	3500.00	
		Total in Rs	17,000.00	
18	Date of commencement of the Project :	1 Feb 2021		
19	Probable date of completion of the project :	30 July 2021		
20	Duration of project work :	6 months		
21	Pert chart for completion of the project in said duration as per planned activities: Yes			

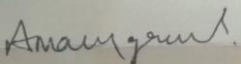
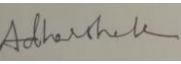
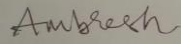
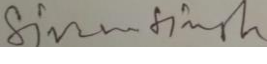
Sl.No	Activities Planned	1 Month/ Week	2 Month/ Week	3 Month/ Week	4 Month/ Week	5 Month/ Week	6 Month/ Week
01	Literature review						
02	Planning / Designing						
03	Assembly/ Fabrication work						
04	Final Testing						
05	Result & Calculation / Conclusion						
06	Preparation of Report & Submission						

DECLARATION BY THE STUDENTS

We, the project group members hereby declare that the details enclosed in the project proposal are true and correct to the best of our knowledge. We undertake to inform VTU, of any changes there in the project title, students name will be intimated immediately. In case, any of the above information is found to be false or untrue or misleading, we are aware that we may be held liable for it.

We are aware that the project group has to exhibit / demonstrate the project for evaluation in the VTU Regional centre and for exhibition at VTU, Belagavi. If the project group fails to attend the evaluation in Regional centre and for Exhibition in VTU Belagavi, the sponsored project amount will be returned back to VTU immediately

We also hereby, enclose the endorsement form to VTU, Belagavi.

SL.No	Name of the Student	Signature of the Student
01	AMANAGARWAL	
02	AMBRESH	
03	ADARSHA K	
04	SHIVANANDANSINGH	



Sri SAIRAM COLLEGE OF ENGINEERING

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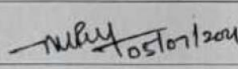
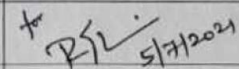
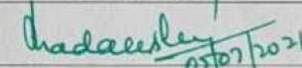


ENDORSEMENT

This is to certify that

- 1] AMAN AGARWAL
- 2] AMBRESH
- 3] ADARSHA K
- 4] SHIVANANDAN SINGH

Are bonafide students of Department of Electrical & Electronics Engineering in of our institution. If the project proposal submitted by these students under VTU Sponsored Student Project Proposal is selected by VTU, we will provide the required laboratory/Computer/infrastructure support in our college/Institution. Further we also take necessary steps that the project group will exhibit / demonstrate their project in the regional centre and for exhibition at VTU, Belagavi. If the student group fails to attend the evaluation in regional centre and exhibition at VTU Belagavi, the supported project amount will be returned back to VTU immediately.

Signature of Project Guide with date	Signature of HOD with Seal and date	Signature of Principal with seal and date
 05/07/2021	 5/7/2021	 05/07/2021

Prof. Madhava Rao J

Prof. K V Malini




Dr. B. Shadaksharappa

Head of the Department
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Sri Sairam College of Engineering
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PRINCIPAL
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www.sairamgroup.in

	Visvesvaraya Technological University “JnanaSangama” Belagavi: 590018 Karnataka,India. Tele: 0831-2498225 ,2405454
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VTU Sponsored Student Project Proposal Format

01	Academic Year :	2020-2021	
02	Semester :	8th Semester	
03	Name of the College :	Sri Sairam College Of Engineering	
04	Branch:	Electrical And Electronics Engineering	
05	Project Title:	BUILDING MONITORING SYSTEM FOR EMPLOYEES AGAINST SYMPTOMS OF COVID-19 USING IOT (SWASTHYA) .	
06	Project Discipline:	Health care	
07	Principal	Name:	Prof. B SHADAKSHARAPPA
		Contact No:	9900545101
		Email id:	principal@sairamce.edu.in
08	HOD	Name:	Prof. MALINI K V
		Contact No:	9902748006
		Email id:	hod.eee@sairamce.edu.in
09	Project Guide	Name:	Prof. PRASHANTH K
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10	Project Co-Guide(If any)	Name:	Prof. MALINI K V
		Contact No:	9902748006
		Email id:	hod.eee@sairamce.edu.in
11	Project Committee coordinator (Identified by the college) :	Name:	Prof. Harish babu
		Contact No:	9036527118
		Email id:	harishbabu.mech@sairamce.edu.in

12	Name of project group Members	
	1.Group leader and Member	
	Name: Dhanush Ps	
	USN NO. :1SB17EE008	
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	Email id: sce17ee003@sairamtap.edu.in	
	2.Member	
	Name: Mahesh K	
	USN No. : 1SB17EE014	
	Contact No: 7019578201	
	Email id: sce17ee027@sairamtap.edu.in	
	3.Member	
Name: Monoj P S		
USN No. : 1SB17EE017		
Contact No: 8095342016		
Email id: sce17ee008@sairamtap.edu.in		
13	Scope / Objectives of the project:	<p>In order to solve this problem we here propose a fully automated temperature scanner and entry provider system. It is a multipurpose system that has a wide range of applications. The system makes use of a contactless temperature scanner and a mask monitor. The scanner is connected directly with a human barrier to bar entry if high temperature or no mask is detected.</p> <p>Any person will not be provided entry without temperature and mask scan. Only person having both conditions is instantly allowed inside. The system uses temperature sensor and camera connected with a raspberry pi system to control the entire operation.</p> <p>The camera is used to scan for mask and temperature sensor for forehead temperature. The raspberry processes the sensor inputs and decides whether the person is to be allowed. In this case the system operates a motor to open the barrier allowing the person to enter the premises. If a person is flagged by system for high temperature or no</p>

		<p>Mask the system glows the red light and bars the person from entry. Also the face and temperature of person is transmitted over IOT to server for authorities to take action and test the person for covid.</p> <p>Thus the system provides a 100% automated system to prevent the spread of COVID.</p> <p>And we has seen that in resent days the employs in private sectors and government sectors are not working in proper time to time work , some of the employees comes to industry , but they roam here and there , moves out of the work , so to monitor them we will be using GPS technology.</p>
<p>14</p>	<p>Methodology of work: (Including diagram, flow chart and design calculations)</p>	<p>BLOCK DIAGRAM :</p> <p>The diagram illustrates the access control process. It begins with an employee reaching the access point. The system performs facial recognition, temperature scanning, and mask scanning. If the scan is successful, access is granted to the institution. If the scan fails, an alert is activated. The flowchart includes a decision point with 'IF YES' leading to the institution and 'IF NO' leading to an alert. The Sairam Institutions logo and website URL (www.sairamce.edu.in) are also present.</p>

		<p>Methodology : 1.FOR TEMPERATURE CHECK</p> <p>-The temperature measurement subsystem based on Arduino Uno measures passenger’s temperature using contactless IR sensor. The passengers pass one by one. In case that passenger’s temperature exceeds average human body (37°C), then Arduino Uno generates signal to lock the door in order to prevent the person from entering the building and sends message which tells that person with high body temperature was detected at a certain location. Otherwise, the door is opened to let the person in.</p> <p>2. FOR FACE MASK DETECTION</p> <p>-Here we will be using the Raspberry pi camera, As the camera background Python Open cv is used. The camera captures the image and checks the conditions , that if the persons mount and nose is detected then it gives the message ‘No mask found’ , if not detected it gives the message ‘Mask found’.</p> <p>3.EMPLOYEMENT MONITORING</p> <p>The Idea is that GPS offers a widely useable instrument to collect invaluable spatial-temporal data on different scales and in different settings adding new layers of knowledge to urban studies, but the use of GPS-technology and deployment of GPS-devices still offers significant challenges for future research.</p>
15	Expected Outcome of the project:	The proposed method achieved a high recognition performance. For the best of our knowledge, this is the first work that addresses the problem of masked face recognition during COVID–19 pandemic. It is worth stating that this study is not limited to this pandemic period since a lot of people are self-aware constantly, they take care of their health and wear masks to protect themselves against pollution and to reduce other pathogens

		transmission. And we will be getting a good percentage of preferable outcomes during the Contact less Human temperature checking also. So by this , the project will get helped out to the society.
16	Application of the project :	<ul style="list-style-type: none"> • Railways . • Airport . • Offices . • Industries. • Educational institutions. • Other Public Places
17	Budget details with Materials required:	<ol style="list-style-type: none"> 1. Raspberry pi3 – 4300/- 2. pi camera – 420/- 3. MLX90614 (IR based Temperature sensor) – 900/- 4. DC motor – 70/- 5. Buzzer – 50/- 6. LCD display – 180/- 7. LED indicators – 30/- 8. Battery – 50/- 9. Power cable & Jumper wires – 200/- 10. Miscellaneous – 1000/- 11. For fabrication we need add 6000/- to 8000/- rupees. <p style="text-align: center;">Grand total : 20,000/-</p>
18	Date of commencement of the Project :	1/02/2021
19	Probable date of completion of the project :	30/07/2021
20	Duration of project work :	6 MONTHS

Pert chart for completion of the project in said duration as per planned activities: yes


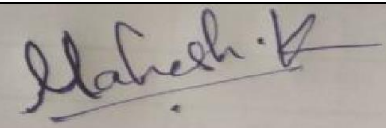
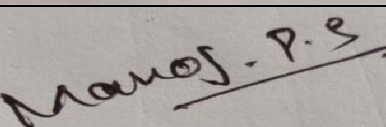
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We also hereby, enclose the endorsement form to VTU, Belagavi.

SL.No	Name of the Student	Signature with date
01	DHANUSH PS	
02	MAHESH K	
		



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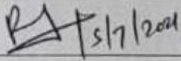
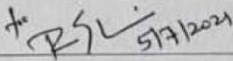
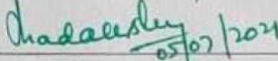


ENDORSEMENT

This is to certify that

- 1] DHANUSH P S
- 2] MAHESH K
- 3] MONOJ P S

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Signature of Project Guide with date	Signature of HOD with Seal and date	Signature of Principal with seal and date,
 5/7/2021	 5/7/2021	 05/07/2021
Prof. Prashantha K	Prof. K V Malini	Dr. B. Shadaksharappa PRINCIPAL

Head of the Department
Electrical & Electronics Engineering
Sri Sairam College of Engineering
Anekal, Bengaluru - 562 106.

Sri Sairam College Of Engineering
Sai Leo Nagar, Guddanahalli Post,
Anekal, Bengaluru - 562 106



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