

CAUVERY COLLEGE FOR WOMEN

(AUTONOMOUS)

Nationally Accredited (3rd Cycle) with 'A' Grade by NAAC



Date: 25/03/2022

To: Whom so it May Concern:

Sub: Smart India Hackathon 2022 – Appointment of College SPOC

This is to inform that the following faculty member from our institute has been appointed as College Single Point of Contact (College SPOC) for Smart India Hackathon 2022.

Name of Official: Dr.R.Subha

Designation: Assistant Professor in Chemistry

Mobile no: 9944400287

Email id: subha.chem@cauverycollege.ac.in

We understand that, the SPOC will be:

- Single Point of Contact to reach out to regarding any SIH2022 related communication to the institute/ student teams from SIH organizers.
- SPOC will be responsible for nominating top 15 teams - 10 Shortlisted and 5 Waitlist teams inclusive of both software and hardware.



Sincerely,
V. Sujatha
Dr. V. Sujatha
Principal
Cauvery College For Women
(Autonomous)
Annamalai Nagar,
Tiruchirappalli - 620 018,
Tamilnadu.

Annamalai Nagar, Tiruchirappalli - 620 018, Tamil Nadu, South India.

Website : cauverycollege.ac.in Phone : 0431 - 2763939, 2751232 Fax : 0431 - 2751234

Email : cauverycollege_try@rediffmail.com, principal@cauverycollege.ac.in

CAUVERY COLLEGE FOR WOMEN (AUTONOMOUS)
ENTREPRENURSHIP DEVELOPMENT CELL
INSTITUTION'S INNOVATION COUNCIL / IDEATION CLUB
REPORT OF INTERNAL SMART INDIA HACKATHON 2022

Institution's Innovation Council jointly with Ideation Club and Entrepreneurship Development Cell conducted "INTERNAL SMART INDIA HACKATHON CONTEST 2022" by inviting various students from different disciplines to highlight their innovative ideas for the problem statements given in the SIH portal. An online internal hackathon contest was organized on 05.04.2022 from 1pm to 3pm. The judges were Mr.Mohammed Ithiyas, Proprietor, Robotics & Industrial Automation, Trichy, Mr.S.Santhosh, CEO, Trichy Agri Business Incubation Forum, Trichy, Dr.P.Sivakumar, Ariviya Technology, Startup firm, Pattukotai and Dr.E.Rahul, CEO, Design officer, ATESH Labs, Silver link foundation. The students explained their ideas in the meet and few of the student ideas were evaluated by the respective judges and selected the feasible project that is nominated for the SIH Contest.

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ISO 9001:2015
Annamalai Nagar, Trichy 18.
INSTITUTION'S INNOVATION COUNCIL
&
IDEATION CLUB
jointly Organizes
**INTERNAL HACKATHON ON
INNOVATIVE IDEAS 2022**
Resource Persons

Mr. Mohammed Ithiyas B.E./MCT Founder, Robotician- Makers and learners, Beema Nagar, Trichy	Mr. S. Santhosh Chief Executive Officer EDII-TABIF, Trichy.
Dr. E. Rahul, Chief Design Officer, ATESH Lab, Silver link foundation.	Dr. P. Sivakumar Arviya Technologies, Startup Firm, Pattukottai.

Date: 5th April 2022
Time: 1.00-3.00pm

Share your ideas to our mail ffc@cauverycollege.ac.in
with Maximum 250 words.



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25 Following 11 Followers

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 @ic2002 @A04

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@ic_for

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What's happening

War in Ukraine - LIVE
US and EU sanction two Putin daughters and tighten penalties on Russian banks

Business Insider Inc. @BusinessInsider
Top 10 companies to grow your career in India according to LinkedIn

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#PetroWatch
Trending with #BIO100Index

Trending in India
#YestBank

Crickets - LIVE
IPL 2022: Kolkata beat Mumbai by five wickets
Trending with #IPL2022

ICCA

Advertisement of Internal Hackathon on Innovative Ideas

On 3rd April 2022, ICCA organized an internal hackathon for all the students of ICCA. The purpose of this hackathon was to encourage the students to think creatively and come up with innovative ideas. The students were given a topic and they had to come up with a solution within a given time frame. The hackathon was a great success and the students showed a lot of creativity and innovation. The winning ideas were presented to the faculty members and they were highly appreciated. The hackathon was a great learning experience for the students and it helped them to develop their problem-solving skills. The hackathon was a great success and the students showed a lot of creativity and innovation. The winning ideas were presented to the faculty members and they were highly appreciated. The hackathon was a great learning experience for the students and it helped them to develop their problem-solving skills.

ICCA

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PRODUCTS OF MACA IN MARKET

Maca the medicinal herb is available in various forms such as capsule, powder, energy drink and so on. Even the products are available in the way of organic tea.

ICCA



The Evaluators of the ideas were:

1. Dr.P.Sivakumar,Ariviya Technology, Startup firm,Pattukotai



2. Mr.S.Santhosh, CEO, Trichy Agri Business Incubation Forum, Trichy



3. Mr.Mohammed Ithyas,Proprietor, Robotics & Industrial Automation, Trichy



4. Dr.E.Rahul, CEO, Design officer,ATESH Labs, Silver link foundation



The following is the list of students participated in the Smart India Hackathon'2022

S.NO	Name of the student	Department	Idea	Problem Statement	Specific theme	Scores/20
1	Afia Anjum J. Aysha P.Dharshini	I B.Sc Biotech	Dream Sleepy salve	Student Innovation/Hardware	Health care	10
2	B.Sridevi A.Swetha	IIB.Sc Biotech	Natural Dyes	Student Innovation/Hardware		9
3	K.Dhanuja	III B.Sc Biotech	Medicinal root as an Adaptogens for PCOs	Student Innovation/Hardware	Health care	10
4	S.Subashini	III B.Sc Biotech	Indian Baal tree drinks	Student Innovation/Hardware	Health care	10
5	N.Sowmya	II PG Chem	Plant extract medicines Synthesis of magnesium oxide nano catalyst for sonalytic degradation of organic dye from waste water	Student Innovation/Hardware	Clean & green Technology	12
6	Ms S.Agalya & Ms S.Fathima	Faculty N&D	Development of software on dietary management for renal failure	Mobile application for Diet Recall	Healthtech	16



7	S.Karthiga	II PG Chem	Removal of VAT indigo Blue dye using Eichhornia Crassipes Biomass: kinetics and thermodynamics	Student Innovation/Hardware	Clean & green Technology	14
8	R.Kirthika A. Nivetha	IIB.Sc Maths I B.Sc Maths	Attendance system using Infrared sensor in bus	Student Innovation/Software	Smart device	12.5
9.	N.Sinduja	Research scholar in Maths	Executives of Entrepreneurship in future experiments	Software	Smart device	15
10	T.Swathi	Research scholar in Maths	A modern approach to a global mean temperature fuzzy inventory model as a consequence of carbon reduction	Software	Smart device	16
11	D.Sobiya T.Sivashangari T.Sneka B.Sneka	III CS	Smart kitchen using raspberry pi	Student Innovation/Software	Smart device	16.5
12	V.Jayapriya	III B.sc PHYSICS	Digital Shopping performance	Student Innovation/Software	Smart device	15.5



			e			
13	Kothaimathi. S	III B.sc PHYSICS		Student Innovation/Software	Smart device	16
14	S.Jotheswari	III B.sc PHYSICS	Digital QR codes	Student Innovation/Software	Smart device	15
15	R.Nivetha	II PG Physics	Multifunctional device with back for blind people	Student Innovation/Software	Smart device	17
16	Afnan.S	II PG Physics	Floating farms	Student Innovation/Software	Smart device	15
17	G.Priyadharsini	II PG Physics	Speed checker to detect rash driving on vehicles using IR sensor	Student Innovation/Software	Smart device	14.3
18	S.Dhanalakshmi	III B.sc PHYSICS	Umbrella for more than five persons	Hardware	Rural development	13
19	T.Harini	III B.sc PHYSICS	Smart Infant Incubator using Peltier	Student Innovation/Software	Smart device	18
20.	Pradeepa	I B.sc Physics	Satellite and its communications	Student Innovation/Software	Smart automation	17.5
21	Dr.R.Subha	Chemistry	AI based interactive robot for elderly care	Hardware	Smart automation	17



22	Dr.R.Subha	Chemistry	Tracking of plastic waste	Software	Cleen & Green Tech	17.5
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The above ideas were discussed in the meet and the evaluators selected the best seven ideas that will be nominated for Smart India Hackathon Contest 2022. The selected ideas are:

S.No	Name	Dept	Problem Statement	Category	Theme
1	Dr.R.Subha & Dr.S.Sowmya Ms.Dhaathshyini	Chemistry	Tracking of plastic waste <i>Bions</i>	Software	Clean & Green Tech
2	T.Harini	III B.sc PHYSICS	Smart Infant Incubator using Peltier <i>Infant Peltier</i>	Student Innovation/Software	Smart device
3	Pradeepa	I B.sc Physics	Satellite and its communications <i>Sa com</i>	Student Innovation/Software	Smart automation
4	R.Nivetha	II PG Physics	Multifunctional device with backpack for blind people	Student Innovation/Software	Smart device
5	D.Sobiya T.Sivashangari T.Sneka B.Sneka	III CS	Smart kitchen using raspberry pi	Student Innovation/Software	Smart device
6	Ms S.Agalya & Ms S.Fathima	Faculty N&D	Development of software on dietary management for renal failure	Mobile application for Diet Recall	Healthtech



V. Vijayalaxmi
PRINCIPAL/IIC PRESIDENT

12-4-22

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Tracking of Plastic waste using IOT to minimize environmental contaminations

Dr.R.Subha, Assistant Professor, Cauvery College for Women(Autonomous)
Dr.S.Sowmya, Assistant Professor, Cauvery College for Women(Autonomous)
Mohammed Ithyoos, Startup founder, Robotics, Trichy

Plastic wastes are increasing due to economic development as well as people's changing patterns of consumption and production. The disposal of plastic waste is harmful to the environment and poses a threat to human health. Plastic waste must be reduced to protect the environment. To reduce plastic waste, education is of paramount importance since it can affect people's knowledge, attitude, and behaviour toward plastic waste management. The proposed title suggests a system that tracks, segregate and make it reuse thereby reducing the amount of plastic generated. The solution is software-based that uses machine learning algorithms to differentiate biodegradable and non-biodegradable and other wastes according to government norms, by using IoT we can calculate the amount of waste generated hence easy disposal can be done. Separate bins were used for classification of the type of waste, thus waste for recycling can be separated without or human-less effort.



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Multifunctional device with backpack for Blind people

Ms.R.Nivetha, II M.Sc Physics student, Cauvery College For Women (Autonomous)

Dr.S.Gowri, Associate Professor, Cauvery College for Women(Autonomous)

Millions of people around the world are estimated to be visually impaired, about 90% of which live in low income settings. Performing daily routine activities such as moving around places, detecting obstacles and identifying various objects has always been a serious problem for them. Objective: Keeping such problems in consideration, designing a low cost, portable, wearable and reliable hardware along with the efficient software. **This wearable backpack (bag) will help visually impaired people** in such a way that they will move easily from one place to another by avoiding any obstacle in their way, that too without the need of help from other people. They will also be able to detect/recognise various objects commonly present around them. This will aid them in performing their daily chores easily, independently and more efficiently in an affordable manner.

Specifications: The project basically is an integration of both Digital Image Processing and embedded Sensors and it will be in the form of a wearable backpack (bag). This bag will be easy to wear and it will have all the equipment mounted in it.

It will consist of multiple functions which include:

1). **Obstacle detection using Sensors** In this part an array of sensors are mounted on the front side of the shoulder strap. Placing 5 sensors in a vertical line facing different angles so that **they cover more area to detect any obstacle**. When the **blind person will be walking, the sensors will detect any obstacle coming in the way**. The output of these sensor go to the Arduino board which detects the changes and sends the result to the Raspberry Pi kit which gives the output to the user in the form of audio signal ?Stop? through the headphones/speakers.

2). **Face Detection** using Image processing: In this module when the user will enter some place e.g. a room, he/she will press a specified button on the keypad mounted on the bag. This will call a function in which face detection algorithm is performed on the image taken by the camera that is place at the front side of the jacket. That function will then give an output in the form of audio signal and **tell the user that how many people are there in this room**.

3). **Image to Speech Output** using Image processing: In this part the blind person will place the image (in which some text is written) in front of the mounted camera and press a specified button on the keypad. This will call a function in which **image processing is performed to convert it into text**. This text will be sent in another function autonomously and it will convert this text into audio signal and give the output to the user via headphones. In this way blind people will be able to ?hear? written things rather than ?read?.

4). **Currency Detection** using image processing: In this part the user will place paper currency in front of the mounted camera and press a specified button. This will call a function and perform given algorithm **to detect the amount of that currency**.



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SMART INFANT INCUBATOR USING PELTIER

Ms.T.Harni, III B.Sc Physics student, Cauvery College For Women (Autonomous)

Dr.S.Gowri, Associate Professor, Cauvery College for Women(Autonomous)

The neonatal incubator is an apparatus that provides a closed and controlled environment for the sustenance of premature babies. But recently, many premature babies have lost their lives due to a lack of proper monitoring of the incubator that leads to accidents. The incubator is used for the premature baby to maintain the baby's temperature. The temperature production is done by the incubator. Peltier elements are controlled by the comparator and the current temperature is controlled by the comparator. If the heat has decreased the incubator then the relay is turned on the Peltier. Peltier are heated the incubator. This project deals with the cost-effective design of a device that monitors certain parameters such as temperature inside the incubator. so that proper the above actions can be taken in advance, to maintain the environment inside the incubator and ensure safety to the infant's life. So, the objective of this project is to overcome -mentioned drawbacks and provide a safe and affordable mechanism for monitoring the incubator.

One comparator application is called the pulse-width modulator, and is made by comparing a sine-wave AC signal against a DC reference voltage. As the DC reference voltage is adjusted, the square-wave output of the comparator changes its duty cycle (positive versus negative times). Thus, the DC reference voltage controls, or modulates the pulse width of the output voltage.



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SATELLITE AND ITS COMMUNICATIONS

Ms.Pradeepa, I B.Sc Physics student, Cauvery College For Women (Autonomous)

Dr.S.Gowri, Associate Professor, Cauvery College for Women(Autonomous)

Satellites have evolutionized communication. Satellite communication has served mankind in many ways for instance its is used to predict weather and broadcast storm warnings and also provides a wide range of communication services in the fields of relaying television programs,digital data for a multitude of business services. It might not surprise us if, in near future satellite links are used for voice and fax transmission to aircraft on international routes. Communications satellite systems have entered a period of transition from point-to-point high-capacity trunk communications between large, costly ground terminals to multipoint-to-multipoint communications between small, low-cost stations. As any invention develops with the passage of time, satellite communication has also moved a step ahead from what it was in the past with the use of several techniques such as frequency reuse, interconnecting many ground stations spread over the world, concept of multiple spot beam communications, these days lasers are effectively used for transmission through satellites. The latest development in satellites is the use of networks of small satellites in low earth orbits .In this present era, communication plays a vital role. We use a wide range of devices to communicate between two persons placed at different places (irrespective of the distance between them). Any earth-orbiting spacecraft that providescommunication over long distances by reflecting or relaying radio-frequency signals. Satellite shave evolutionized communication by making worldwide telephone links and live broadcast common occurrences. A satellite receives a microwave signal from a ground station on the earth(the uplink), then amplifies and retransmits the signal back to a receiving station or stations on earth at a different frequency (the downlink). A communication satellite is in geo synchronous orbit, which means that it is orbiting at the same speed as the earth is revolving. The satellitestays in the same position relative to the surface of the earth, so that the broadcasting station willnever lose contact with the receive



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DEVELOPMENT OF SOFTWARE ON DIETARY MANAGEMENT FOR RENAL FAILURE

Ms S.Agalya & Ms S.Fathima

Assistant Professor,

Department of Food Service Management and Dietetics

Cauvery College for Women (Autonomous), Trichy-18

Today is an era of Software right from purchasing grocery, readymade food, booking a ticket for a cab/flight/train or even seeking appointment with the family General Physician. The only software which has eluded the common man is a diet chart for patients suffering from acute diseases. To fill this lacuna, a new software app has been contrived to be of use to acute renal failure patients, which helps to minimize the treatment cost, time and availability at the click of a button. An earnest attempt has been made by us to develop a software app as a ready reckoner for providing diet chart for patients suffering from acute renal failure to select the balanced choice of food in pursuant on the renal condition.

The app has been contrived for ALD patients for different age groups, varying symptoms, complications, different blood parameters like serum creatinine and urea. The app allows the patient to select the right choice of answer from the questionnaire to substantiate the ailment parameters. On the basis of the answers, it would direct them for the apt choice of food and thereby display the diet chart. It would provide a comprehensive list of edibles to be include and a substantial guide of food items to be avoided. It confers a variety of recipes' apt for the physiological component of the renal complication of the patient.

The aim in conceiving the app for renal failure patients is an earnest attempt for the dietician to penetrate the vast medical field with an attempt to provide the best variety of diet chart for acute renal afflicted patients at a very affordable cost. The other prerogative of this app is its availability at a short tenor of time.



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Date: 12/04/2022

Sub: Smart India Hackathon 2022 – Nomination

I am pleased to nominate the below team from our college to participate in Smart India Hackathon 2022. AISHE Code of our college is C-35783

Team Name: BIBOT

	Name	Gender (M/F)	Email id	Mobile no.
Team Leader	R.Nivetha	F	pgstdnivethar.phy@cauverycollege.ac.in	9360233392
Team Member	Ms.M.Kamalishwari	F	kamalimayil@gmail.com	9789381982
Team Member	K.Priyadarshini	F	dharshnipria99@gmail.com	9003490275
Team Member	Ms.Afnan	F	afnandawood652@gmail.com	8072530652
Team Member	Ms.Nithyashri	F	nithyasri0911@gmail.com	6379448262
Team Member	R.Preethi	F	preethirajarathinam2000@gmail.com	8248276821
Mentor 1	Dr.S.Gowri	F	gowri.phy@cauverycollege.ac.in	9952645688

Sincerely,

V. Sujatha

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Date: 12/04/2022

Sub: Smart India Hackathon 2022 – Nomination

I am pleased to nominate the below team from our college to participate in Smart India Hackathon 2022. AISHE Code of our college is C-35783

Team Name: BIONS

	Name	Gender (M/F)	Email id	Mobile no.
Team Leader	Ms.Dhaatshaayini	F	dhaatshaayinimanoharan@gmail.com	8489089397
Team Member	J.Monica Joycy	F	monicajoycy199804@gmail.com	8072870220
Team Member	B.Kamali	F	kamali.banks@gmail.com	7708994618
Team Member	S.Pooja Devi	F	itsmepuja9797@gmail.com	9677390777
Team Member	Ms.A.Anbusanthini	F	anbusanthini@gmail.com	6382169841
Team Member	M.Keerthika	F	Stdkeerthika.mat@cauverycollege.ac.in	8870957416
Mentor 1	Dr.R.Subha	F	subha.chem@cauverycollege.ac.in	9944400287
Mentor 2	Mr.Mohammed Ithyas	M	mohamedithyas@gmail.com	8526913765
Mentor 3	Ms.Ellakkiya	F	elakkiya.ca@cauverycollege.ac.in	9994683100

Sincerely,

Dr.V.Sujatha

Principal

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Team Name: DIOT

	Name	Gender (M/F)	Email id	Mobile no.
Team Leader	V.L.Abikaysavee	F	Abi.arsvp@gmail.com	6382390166
Team Member	Shameeha Banu.S	F	Shamikaashaa26@gmail.com	9385939794
Team Member	Leema Roselin	F	Leemaroselin2111@gmail.com	9940747743
Team Member	A.Karthika	F	Akarthika879@gmail.com	8667365315
Team Member	M.Geetha	F	Vethash112@gmail.com	8778013016
Team Member	S.T.Manjupavthira	F	Stmanjupavi2905@gmail.com	6374396141
Mentor 1	Ms.S.Agalya	F	sagalya@cauverycollege.ac.in	8428141101
Mentor 2	Ms.S.Fathima	F	fathima.fsmd@cauverycollege.ac.in	9629162082

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SMART INFANT INCUBATOR USING PELTIER

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Team Name: INFANT PELTIER

	Name	Gender (M/F)	Email id	Mobile no.
Team Leader	T.Harini	F	harinithirumalai07@gmail.com	8124888755
Team member	K.Preethi	F	pgstdpreethik.phy@cauverycollege.ac.in	6383604700
Team member	R.Santhiya	F	pgstdsanthiyar.phy@cauverycollege.ac.in	8870820566
Team member	S.Kothaimathi	F	19117050.phy@cauverycollege.ac.in	7558138423
Team member	Tharani Priya	F	19117104.phy@cauverycollege.ac.in	9940974812
Team member	J.Sindhuja	F	pgstdsindhujaj.phy@cauverycollege.ac.in	8072871683
Mentor 1	Dr.S.Gowri	F	gowri.phy@cauverycollege.ac.in	9952645688

Sincerely,

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Multifunctional device with backpack for Blind people

Ms.R.Nivetha, II M.Sc Physics student, Cauvery College For Women (Autonomous)

Dr.S.Gowri, Associate Professor, Cauvery College for Women(Autonomous)

Millions of people around the world are estimated to be visually impaired, about 90% of which live in low income settings. Performing daily routine activities such as moving around places, detecting obstacles and identifying various objects has always been a serious problem for them. Objective: Keeping such problems in consideration, designing a low cost, portable, wearable and reliable hardware along with the efficient software. **This wearable backpack (bag) will help visually impaired people** in such a way that they will move easily from one place to another by avoiding any obstacle in their way, that too without the need of help from other people. They will also be able to detect/recognise various objects commonly present around them. This will aid them in performing their daily chores easily, independently and more efficiently in an affordable manner.

Specifications: The project basically is an integration of both Digital Image Processing and embedded Sensors and it will be in the form of a wearable backpack (bag). This bag will be easy to wear and it will have all the equipment mounted in it.

It will consist of multiple functions which include:

- 1). **Obstacle detection using Sensors** In this part an array of sensors are mounted on the front side of the shoulder strap. Placing 5 sensors in a vertical line facing different angles so that **they cover more area to detect any obstacle**. When the **blind person will be walking, the sensors will detect any obstacle coming in the way**. The output of these sensor go to the Arduino board which detects the changes and sends the result to the Raspberry Pi kit which gives the output to the user in the form of audio signal "Stop" through the headphones/speakers.
- 2). **Face Detection** using Image processing: In this module when the user will enter some place e.g. a room, he/she will press a specified button on the keypad mounted on the bag. This will call a function in which face detection algorithm is performed on the image taken by the camera that is place at the front side of the jacket. That function will then give an output in the form of audio signal and **tell the user that how many people are there in this room**.
- 3). **Image to Speech Output** using Image processing: In this part the blind person will place the image (in which some text is written) in front of the mounted camera and press a specified button on the keypad. This will call a function in which **image processing is performed to convert it into text**. This text will be sent in another function autonomously and it will convert this text into audio signal and give the output to the user via headphones. In this way blind people will be able to "hear" written things rather than "read".
- 4). **Currency Detection** using image processing: In this part the user will place paper currency in front of the mounted camera and press a specified button. This will call a function and perform given algorithm **to detect the amount of that currency**.



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SMART KITCHEN USING RASPBERRY PI

B. T. SIVASHANGARI, SNEHA, T. SNEKA, D. SOBIYA , B.Sc Computer Science student, Cauvery College For Women (Autonomous)

Ms.Elakiya, Assistant Professor, Cauvery College for Women(Autonomous)

In India, almost all people are using Liquefied Petroleum Gas (LPG) as a fuel for cooking. But in this field, the steps taken for safety purposes are very less. LPG is a flammable gas, it has the potential to cause fire accidents heavily. To avoid fire accidents, many researchers are applying their effort to design new prototype models. IoT-based gas leakage detection and monitor systems use different sensors and gas knobs to avoid fire accidents in the kitchen. It will acquire input from the sensor and control the gas knob automatically either from High ignition to Medium or from Medium to Low. Gas leakage and the presence of moisture will enable the DC motor to rotate the gas stove knob automatically to stop the gas flow in the gas stove. If a gas leakage is detected then it will be intimated to the end-user by using the pushing box option in the cloud environment. The proposed model also enables the user to analyze the usage of gas throughout the year.



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Date: 12/04/2022

Sub: Smart India Hackathon 2022 – Nomination

I am pleased to nominate the below team from our college to participate in Smart India Hackathon 2022. AISHE Code of our college is C-35783

Team Name: SACOM

	Name	Gender (M/F)	Email id	Mobile no.
Team Leader	Ms.N.V.Pradeepa	F	remopradeepa1@gmail.com	6384715100
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Team Member	A.Gunavarthini	F	gunavarthinia@gmail.com	9444330811
Team Member	A.Keerthana	F	keeru0247@gmail.com	9361998747
Team Member	A.Gayathri	F	Agayathrigayul12@gmail.com	6381023797
Team Member	S.Gayathri	F	gayathrisubramani87@gmail.com	8925036997
Mentor 1	Dr.S.Gowri	F	gowri.phy@cauverycollege.ac.in	9952645688

Sincerely,

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SATELLITE AND ITS COMMUNICATIONS

Ms.Pradeepa, I B.Sc Physics student, Cauvery College For Women (Autonomous)

Dr.S.Gowri, Associate Professor, Cauvery College for Women(Autonomous)

Satellites have evolutionized communication. Satellite communication has served mankind in many ways for instance its is used to predict weather and broadcast storm warnings and also provides a wide range of communication services in the fields of relaying television programs,digital data for a multitude of business services. It might not surprise us if, in near future satellite links are used for voice and fax transmission to aircraft on international routes. Communications satellite systems have entered a period of transition from point-to-point high-capacity trunk communications between large, costly ground terminals to multipoint-to-multipoint communications between small, low-cost stations. As any invention develops with the passage of time, satellite communication has also moved a step ahead from what it was in the past with the use of several techniques such as frequency reuse, interconnecting many ground stations spread over the world, concept of multiple spot beam communications, these days lasers are effectively used for transmission through satellites. The latest development in satellites is the use of networks of small satellites in low earth orbits .In this present era, communication plays a vital role. We use a wide range of devices to communicate between two persons placed at different places (irrespective of the distance between them). Any earth-orbiting spacecraft that providescommunication over long distances by reflecting or relaying radio-frequency signals. Satellite shave evolutionized communication by making worldwide telephone links and live broadcast common occurrences. A satellite receives a microwave signal from a ground station on the earth(the uplink), then amplifies and retransmits the signal back to a receiving station or stations on earth at a different frequency (the downlink). A communication satellite is in geo synchronous or bit, which means that it is orbiting at the same speed as the earth is revolving. The satellitestays in the same position relative to the surface of the earth, so that the broadcasting station willnever lose contact with the receive



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Date: 12/04/2022

Sub: Smart India Hackathon 2022 – Nomination

I am pleased to nominate the below team from our college to participate in Smart India Hackathon 2022. AISHE Code of our college is C-35783

Team Name: **PELLEPER SMART KITCHEN**

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Team Member	M.Vinotha	F	vinothamanivel65@gmail.com	8940587589
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DEVELOPMENT OF SOFTWARE ON DIETARY MANAGEMENT FOR RENAL FAILURE

Ms S.Agalya & Ms S.Fathima

Assistant Professor,

Department of Food Service Management and Dietetics

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Today is an era of Software right from purchasing grocery, readymade food, booking a ticket for a cab/flight/train or even seeking appointment with the family General Physician. The only software which has eluded the common man is a diet chart for patients suffering from acute diseases. To fill this lacuna, a new software app has been contrived to be of use to acute renal failure patients, which helps to minimize the treatment cost, time and availability at the click of a button. An earnest attempt has been made by us to develop a software app as a ready reckoner for providing diet chart for patients suffering from acute renal failure to select the balanced choice of food in pursuant on the renal condition.

The app has been contrived for ALD patients for different age groups, varying symptoms, complications, different blood parameters like serum creatinine and urea. The app allows the patient to select the right choice of answer from the questionnaire to substantiate the ailment parameters. On the basis of the answers, it would direct them for the apt choice of food and thereby display the diet chart. It would provide a comprehensive list of edibles to be include and a substantial guide of food items to be avoided. It confers a variety of recipes' apt for the physiological component of the renal complication of the patient.

The aim in conceiving the app for renal failure patients is an earnest attempt for the dietician to penetrate the vast medical field with an attempt to provide the best variety of diet chart for acute renal afflicted patients at a very affordable cost. The other prerogative of this app is its availability at a short tenor of time.



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Tracking of Plastic waste using IOT to minimize environmental contaminations

*Dr.R.Subha, Assistant Professor, Cauvery College for Women(Autonomous)
Dr.S.Sowmya, Assistant Professor, Cauvery College for Women(Autonomous)
Mohammed Ithyoos, Startup founder, Robotics, Trichy*

Plastic wastes are increasing due to economic development as well as people's changing patterns of consumption and production. The disposal of plastic waste is harmful to the environment and poses a threat to human health. Plastic waste must be reduced to protect the environment. To reduce plastic waste, education is of paramount importance since it can affect people's knowledge, attitude, and behaviour toward plastic waste management. The proposed title suggests a system that tracks, segregate and make it reuse thereby reducing the amount of plastic generated. The solution is software-based that uses machine learning algorithms to differentiate biodegradable and non-biodegradable and other wastes according to government norms, by using IoT we can calculate the amount of waste generated hence easy disposal can be done. Separate bins were used for classification of the type of waste, thus waste for recycling can be separated without or human-less effort.



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