Innovation Activities (AY: 2018-19)

List of Events organized and the details:

TECHEXPO - 2019

Geethanjali College of Engineering and Technology

(An UGC Autonomous Institution)
(Approved by AICTE, Affiliated to JNTUH, Hyderabad and accredited by NAAC and NBA)
Cheeryal (V), Keesara (M), Medchal District, Telangana-501301

Chief Patron
Sri.G.Ravinder Reddy,
Secretary
Patron
Dr.S.Udaya Kumar,
Principal
Convener
Prof.B.Hari Kumar,
HOD-ECE
Coordinator
Dr.C.V.Narasimhulu,
Professor, ECE Dept.

Advisory Committee
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Professor and Dean, Academics
Dr.R.Suryanarayana Raju,
Professor and Dean, R&D.
Prof.K.Somasekhara Rao,
Professor & Dean, Student Affairs.
Dr.S.Suryanarayana,
Professor.
Prof.O.V.P.R.Siva Kumar,
Professor.
Dr S Ramana Murthy
Professor
Dr.B.L Prakash
Professor

Steering Committee
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Mr. D V Rami Reddy, Associate Professor
Mr.P.Sudhakar, Associate Professor
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Ms.G.Sreelaxmi, Associate Professor
Ms.M.Laxmi, Associate Professor
Ms B Srilatha, Associate Professor
Ms.B.Mamatha, Assistant Professor
Mr.Ch.Sandeep, Assistant Professor
Mr.P.Naresh Kumar, Assistant Professor
Mr.M.Krishna, Assistant Professor
Mr V Sivaramakrishna, Asst Professor
Mr.K.Victor, Assistant Professor
Mr.B.Ramu, Assistant Professor
Ms A.Sowjanya, Assistant Professor
Mr A.Subramanyam, Assistant Professor

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Date: 6th March 2019

To
The Principal/Director.

Sir/Madam,

Sub: Request to circulate the poster of **TECHEXPO'19** to IV B.Tech ECE
students - Reg.

We are pleased to inform you that department of ECE of Geethanjali College of Engineering and Technology is conducting "**TECHEXPO '19**", 6th National level Hardware and Software project exhibition with the models/projects prepared for their **Mini / Major** projects on **30th March 2019**.

This program is intended to provide opportunity for the students studying final year course to enrich their depth and breadth of knowledge in the area of Electronics and Communication Engineering and to showcase their hidden talents. It also help the students to share their views with their peer members.

An information poster is enclosed herewith providing details of **TECHEXPO'19** and it may please be circulated among final year ECE students and kindly encourages them to participate in good number.

We look forward for an active participation in this **TECHEXPO'19** from your college.

Thanking you

With Regards

Dr.C.V.Narasimhulu
Coordinator
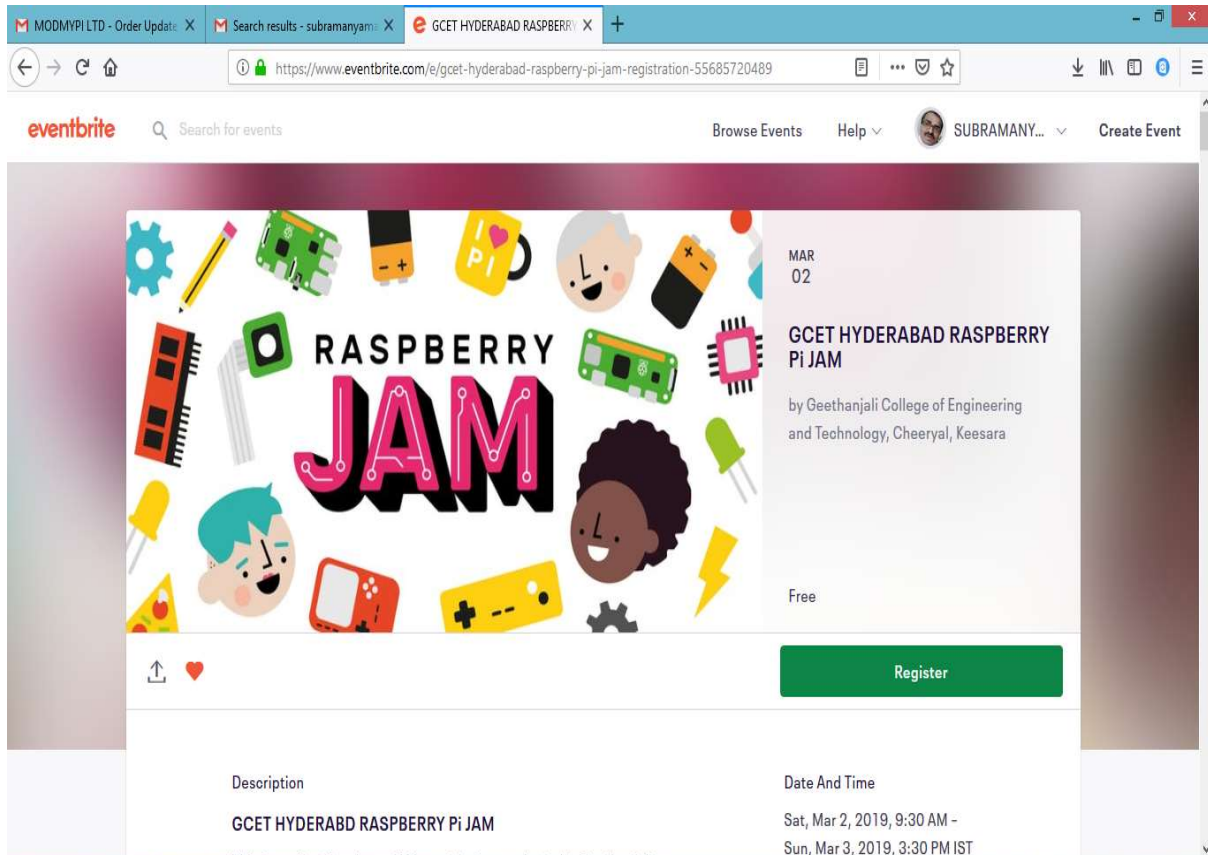
Prof. B.Hari Kumar
Convener

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Techexpo'19

The 6th National level Hardware and Software Project exhibition was organized on 30th March, 2019. Dr. C V Narasimhulu was the coordinator for the Techexpo. A total of 118 batches of students participated in this event including students from reputed colleges in the state of Telangana. Prof. C.R. Sharma, an Electronics Engineer from Madras Institute of Technology (now Anna University) & Former Vice-Chairman, IETE, Hyderabad Center and Dr K. J. Satyanarayana, Former Professor, Osmania University acted as External judges.

S.No	Group	Prize	Name of the Student	College	Photos
1	Major Software	I	P.Kalyani S.Indra Devi V.Sai Prakash Reddy	GCET	
2		II	Ch. Sai Ram Rao V. Srinidhi T.Mani Kanta	GCET	
3		III	Ch.Anusri D. Srinidhi Reddy B.L.Anjaneya Karthik	GCET	
4	Major Hardware	I	G. Ravanth Sai M.Rohith Chandra Gajjala Nishith	CMR	
5		II	K. Sri Vidya D.Uma D. Raghu	GCET	
6		II	A.V.S.Rama Krishna R.Ranjith Kumar S.Ganesh	CVR	
7		III	V.Lavanya G.Sai Usha J.Pranav Deep	ACE	
8		III	V.N.S. L. Sowmya G Hari Chandana V Sri Krishna Priya	GCET	
9	Mini Software	I	Jahnavi Deshmuk Y Sai Kumar K Pavan Kumar	GCET	
10	Mini Hardware	I	Sriya V M.Sowjanya Sri C Anirudh P Pranavi	CVR	
11		II	Ch. Gowtham Sai G Sai Ram Mehantha M Sham	GCET	
12		III	B.Siddharth Goud G.Vandana G Roshan Saketh	GCET	

టెక్ఎక్స్‌పో-2019 సాఫ్ట్‌వేర్ అండ్ హార్డ్‌వేర్

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Raspberry Pi Workshop

GCET HYDERABD RASPBERRY Pi JAM

This is our first Raspberry JAM event being conducted in Geethanjali College of Engineering and Technology (GCET), Cheeryal, Keesara, Hyderabad, India.We are holding a two-day workshop on 2nd and 3rd of March, 2019 for students of our college and other engineering colleges to educate them with hands-on experience using Raspberry Pi boards for digital making.

This weekend is also known as **Raspberry Pi 7th Birthday**.

We plan to expose them to coding and digital making activities and then students will have a fun experience of embedded boards.

Event Schedule
Day 1
2nd March 2019 (Saturday)
- 09:30 - Inaugural Function
- 10:30 - Workshop Starts
- 12:30 - Lunch
- 13:30 - Workshop (continued)
- 15:30 - First Day Event ends

Day 2
3rd March 2019 (Sunday)
- 09:30 - Workshop (Continued)
- 12:30 - Lunch
- 13:30- Workshop (continued)
- 15:30 - Valedictory Session

All equipment is provided for the Workshop.

Who can attend?

All Raspberry Pi enthusiasts of Engineering Colleges.

1) Internal Student Trainers :20 Numbers

2) Internal Student Participants : 30 Numbers

3) External Student Participants : 20 Numbers

4) Internal Students -Project Display & Presentation : 30 Numbers

5) External Students - Project Display & Presentation : 15 Numbers

It is recommended that students bring their own Laptop (Not mandatory) and mobile power bank with USB cable.

If you have your own Raspberry Pi, Mobile SD card(8GB) and USB mouse then your are welcome to bring them along. We help you on how to get them hooked up with Raspberry Pi Board.

Canteen facility is available for Lunch.

The Venue:

Geethanjali College of Engineering and Technology, Cheeriyal, Keesara, Hyderabd, India 501301.

Event Coordinator:
Mr A.SUBRAMANYAM
Assistant Professor and Incharge, R&D Laboratory
Department of ECE
Contact Number: +919000395815

GCET HYDERABAD RASPBERRY Pi JAM on map of raspberrypi.org website registration link
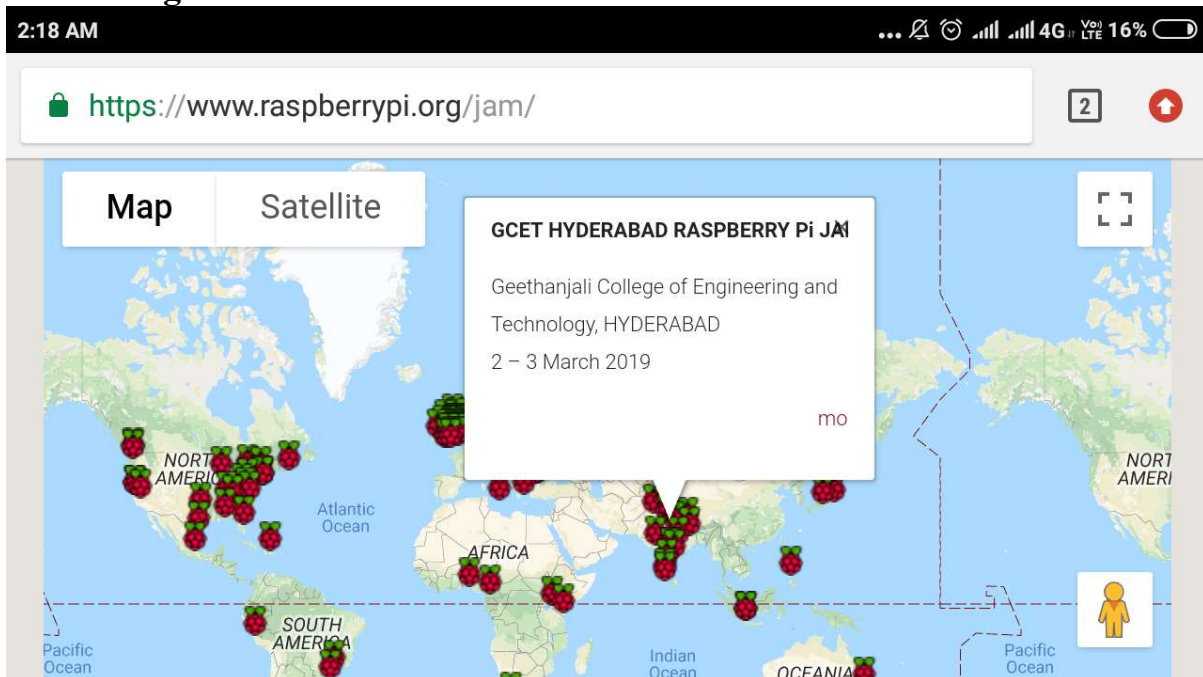
Geethanjali College of Engineering and Technology Campus

Chairman: Mr.G.R.Ravinder Reddy & Principal:Dr.Udaya Kumar Susarla

Head of Department, ECE:Prof. B. Hari Kumar

Advisor, GCET HYDERABAD RASPBERRY Pi JAM & Coordinator JHUB,ECE

Prof. of JNTUH & Director, JHUB : Dr.G Vijaya Kumari

గీతాంజలి ఇంజనీరింగ్ కళాశాలలో 'రాస్బెర్రీ పై' వర్క్‌షాప్

ఆంధ్రజ్యోతి, హైదరాబాద్ సిటీ: గీతాంజలి ఇంజనీరింగ్ కళాశాలలోని ఇంక్యుబేషన్ సెంటర్‌లో 'రాస్బెర్రీ పై' అనే అంశంపై విద్యార్థులు వర్క్ షాప్ నిర్వహించారు. కళాశాలలోని ఇన్నోవేషన్ క్లబ్, స్టూడెంట్ చాప్టర్ సంయుక్త ఆధ్వర్యంలో ఈ కార్యక్రమాన్ని ఏర్పాటు చేశారు. ప్రొఫెసర్లు చంద్రకాంత్, పణి కిషోర్ సహకారంతో విద్యార్థులు రాస్బెర్రీ పై సాంకేతిక పరిజ్ఞానంపై అవగాహన కల్పించారు. ఈ కార్యక్రమానికి ముఖ్యఅతిథిగా హాజరైన ప్రిన్సిపాల్ డాక్టర్ ఉదయ్‌కుమార్ మాట్లాడుతూ ఇలాంటి కార్య క్రమాలతో విద్యార్థులు ఎంతో నేర్చుకుంటారన్నారు. తరగతిలో చెప్పే అంశాల కన్నా ప్రయోగాత్మకంగా రూపొందించి వివరించే అంశాలను త్వరగా అర్థం చేసుకోవడానికి వీలుంటుందన్నారు. ఇలాంటి కార్యక్ర మాలు నిర్వహించే వారికి కళాశాల నుంచి సహాయ సహకారాలు ఉంటాయన్నారు. కార్యక్రమంలో డాక్టర్ నాగేంద్రకు మార్, డాక్టర్ గుంటూరు విజయ పాల్గొన్నారు.

కళాశాలలో 'రాస్బెర్రీ పై' అనే వర్క్‌షాప్‌ను నిర్వహించిన విద్యార్థులు

Raspberry Pi Workshop conducted by Mr. A Subramanyam from GCET in NBKR Engineering College, Gudur, Andhra Pradesh

'ఎన్‌బీకేఆర్'లో జాతీయ సదస్సు

మాట్లాడుతున్న విజయకుమార్‌రెడ్డి

కోట: మండలంలోని విద్యానగర్ ఎన్‌బీకే ఆర్ ఇంజనీరింగ్ కళాశాలలో రెండు రోజుల పాటు జరిగే జాతీయ సదస్సును శుక్రవారం కళాశాల డైరెక్టర్ డాక్టర్ విజయ్‌కుమార్‌రెడ్డి జ్యోతి ప్రజ్వలన చేసి ప్రారంభించారు. ఈ ఈఈఈ స్టూడెంట్ బ్రాంచ్ తరపున స్మార్ట్ ఇండియా ఇనిషియేట్యూవ్ జాతీయ సదస్సు ప్రారంభమైంది. మొదటి రోజు అంతర్జాల ఆధారిత వస్తువులు, ఆర్టిఫిషియల్ ఇంటెలి జెన్స్ వంటి అంశాలపై పలువురు నిపుణులు ప్రసంగించారు. ఈ సదస్సుకు పలు ఇంజనీ రింగ్ కళాశాలల నుంచి ఇంజనీరింగ్ విద్యా ర్థులు హాజరై టెక్నికల్ అంశాలపై పేపర్, పోస్టర్ ప్రజంటేషన్ చేశారు. అనంతరం ప్రాజెక్టు ఎక్స్‌పో నిర్వహించారు. ఈ కార్యక్ర మంలో అసిస్టెంట్ ప్రొఫెసర్ సుబ్రహ్మణ్యం, ఆయా విభాగాధిపతులు పాల్గొన్నారు.

R&D Laboratory, GCET:

36Hr Smart India Hackathon:

held at Geethanjali College of Engineering in Association with J-Hub of JNTUH on 5th - 6th Jan 2019

Pre-Hackathon:
A separate website https://events.geethanjaliapp.com/ was created to disseminate the information about the Agritech-e-thon that was hosted at Geethanjali College of Engineering. The above URL was also made available at the college website.
http://www.geethanjaliinstitutions.com/engineering/index.html

The website had a provision to receive registrations through 'Google forms'. Process flow chart for the 'entire process' as given in Annexure 1 is posted in the website.

The registration forms required a small description of the idea which included: Problem statement, proposed solution, market evaluation, prospective customer feedback etc., to be made as a .PPT. A template of which was made available during registrations through the website.
Cash prizes worth 60,000/- were announced by the management as follows
1st Prize: 25,000/- INR;
2nd Prize: 20,000/- INR
3rd Prize: 10,000/- INR
And five consolation prizes of 2000/- INR for each team

Registrations/Responses received:

For the Bootcamp, the registrations received online were 258. It was learnt that J-Hub provided resource persons for AI-ML but Geethanjali has organized another parallel workshop on IoT as well. The attendees for AI-ML were 55 and the attendees for bootcamp workshop on IoT were 135

There were 99 teams that registered online through the website, which included registrations from Tamil Nadu -1, Karnataka – 1, Andhra Pradesh – 3 and 27 from other nearby colleges. However, there were only 56 teams that actually turned up to the event, of which there are 22 teams were from other than Geethanjali College, which also included one (1) college from out of the state - Tamil Nadu. Participants were asked to sign a consent form (Annexure II) to see that discipline is maintained during the event.

During the Hackathon

Inaugural Function
It started at 9:30AM. The convener of the Hackathon briefed about the number of registrations received and the arrangements made. Chairman of the college Mr. Ravinder Reddy and Principal of the college Prof Dr. Susarla Udaya Kumar spoke about the concept of 'project based learning' that is integral to the Hackathon competitions like these. Mr. Srinivas Pothapragada, serial entrepreneur and Venture Capitalist, graced the occasion as chief guest and opined that it is the person who has "identified a problem and proposes a solution" is the most important person in a society. The inaugural function ended at 10:10 AM.

The complete duration of 36 Hrs was divided into four phases:
1. Ideation Phase.
2. Design Phase.
3. Implementation Phase
4. Final Pitching Phase

It would have been an onerous task for the two nominees of JNTUH's to go through all the 56 teams during ideation phase. So, it was suggested that the ideation scrutiny team (consisting of Two JNTUH nominees and two nominees of GCET - Prof Ashok Sarma and Prof Siva Kumar) be split into two teams with one (internal and external) in each team. Both the teams suggested improvements for almost all the teams. This phase ended at 2:10PM. Participants, who completed the ideation phase, were asked to start working on their projects at the venue, who were monitored by the faculty nominated by GCET at the venue.

Post lunch, a second review was started by the same teams at about 4:00PM going to their respective desks and by 5:30PM the scrutiny teams had completed the process. Meanwhile another mentor team nominated by Geethanjali College, Mr. Jagdish Lolugu, Dr. Bernadetta Kwintiana Ane from Engineering Staff College of India and Mr. Ashish Agarwal from Microsoft were suggesting some more improvements to the participants. They started their process at 2:30 PM and ended at about 7:30 PM. All mentors and nominees left at about 5:30PM on Saturday.

At 5:30PM on Saturday, intermediate targets were framed by Prof Siva Kumar and Hackathon convener Dr. Puppala of GCET and they were notified to the participants. Other faculties nominated by GCET were seen continuously guiding the students so as to **freeze their design**.

The internal committee appointed by GCET Prof Ashok Sharma and Prof Siva Kumar started their review again at 11:00 PM on Saturday, which continued until 3:00 AM. Meanwhile, Dr. Radhika (HoD EEE), Dr. Harish Pulluri (EEE), Dr. Devaiah (ME), Mr. Subbarao (ECE), Mr. Sandeep (ECE), Mr. Rajesh (CE) were interacting and guiding the teams.

After returning from a brief rest and freshening up, Profs. Ashok Sharma and Siva Kumar returned again to start their review again at 9:00 AM on Sunday, who were joined by three more mentors Mr. Karthik and Mr. Sudheer from Wipro and Mr. Pavan Kumar from Accenture, all of them nominated by Geethanjali college, at 9:30 AM. They were mentoring and at the same time were awarding the marks as per the criteria given by JNTUH - **Completing the implementation phase, which continued until 4:30PM on Sunday.**

JNTUH's nominees of the final jury from Infosys Mr. Papa Rao Kapuganti and Mr. Madhusudhan Rao were briefed about the progress and they shortlisted 18 teams, to which the jury again went and selected the winners for **during final pitching.**

Valedictory Function:
The valedictory ceremony started at 7:15 PM on 6th January with interaction/feedback from the students from other engineering Colleges. A student from Malla Reddy college of engineering for Women stated that the arrangements made by the team and management during the Hackathon were commendable and no such arrangements were made during the Hackathons in other colleges / universities and the mentoring support received from internal faculty during the Hackathon were extremely helpful for the development of the prototypes. Cash prizes worth 60,000/-INR, as announced by the management, were awarded by the chief guest to the following winners.

Convener   Co- Convener   Principal
Dr. Anil Kumar Puppala   Mr. Phani Kishore   Prof Dr. Susarla Udaya Kumar

Prize	Name of the Participant	College	Title of the project
1st Prize	P. Shraddha B. Sai Priya M. Vyshnavi	**Geethanjali College of Engineering and Technology**	Solar powered agricultural robot
2nd Prize	M. Bhanu Prakash K. Ganesh Kumar G. Lingaiah	Anurag Group of Institutions (CVSR)	Smart irrigation
3rd Prize	G. Uday Kumar B. Gourav Anand G. Sandeep Varma	**Geethanjali College of Engineering and Technology**	Automated Irrigation with Solar Tracker and Moisture sensor
Consolation Prize	K. Sai kumar K. A. Sohail Afridi Y. Adith Keshav	Anurag Group of Institutions (CVSR)	Smart (Driving) license
Consolation Prize	A. Krishnaja P. Sai Ram G. Sai Hanisha	**Geethanjali College of Engineering and Technology**	Impacts of climate change due to urbanization
Consolation Prize	Taseen Priyanka Tiwari D. Hanishaa Sai	Vidya Jyothi Institute Of Technology & sciences	Rural Development squad
Consolation Prize	V. Vinay Kumar L. Venkatesh B. Swamynathan	**Geethanjali College of Engineering and Technology**	Seed sowing
Consolation Prize	M. Abhishek K. Rafeuddin K. Meghana Sai Ramya Teja	**Geethanjali College of Engineering and Technology**	Waste water treatment

Other Facilities:
A request for Police patrol vehicle by the college was kindly considered by Circle Inspector, Keesara Police station and was provided the same. Temporary rest areas were provided for boys and girls in two separate blocks renting about 200 beds. Mr. Ramanjaeyulu and Mr. Naresh took care of the food. Ms. ARL Padmaja and Ms. Sowjanya ensured that there were no boy students to go near the girl's rest areas and vice versa. Student volunteers **(although some of whom were not able to register in the J-Hub's website as was mandated by J-Hub)** did a tremendous job in assisting the jury, team, participants.

Annexure:
  I.   Hackathon at Geethanjali College – flow chart.
 II.   Student consent form.
III.   Boot camp registrations for IoT.
IV.   Boot camp registrations for AI-ML.
 V.   Registration for the Hackathon.

GEETHANJALI COLLEGE OF ENGINEERING AND TECHNOLOGY
Department of Electronics and Communication Engineering

Attendance of ECE students for JHUB Hackathon in Jan 2019

Sl. No.	Year–Section	Roll No.	Name
1	II-A	17R11A0407	Bandari Vishal Reddy
2	II-A	17R11A0424	Kancharla N Shravani
3	II-A	17R11A0444	Snehith Penumathsya
4	II-B	18R15A0411	Tarra Sai Ganesh
5	II-C	17R11A04A0	Billa Divya Sai Sathwik
6	II-C	17R11A04C4	Padamati Manisha
7	II-C	17R11A04D7	Subramanian Ambika
8	II-D	18R15A0432	Mahankali Vinay Babu
9	II-E	17R11A04L3	Gummadavelly Nitish
10	II-E	17R11A04L9	Kollampally Aishwarya
11	II-E	17R11A04N3	Pochana Meghana
12	II-E	17R11A04N8	Reballi Keerthana
13	II-E	17R11A04N9	Rokkam Eswar Sai
14	III-A	16R11A0439	Virupaka Sowmya
15	III-A	16R11A0447	Kotakonda Vinay Kumar
16	III- B	16R11A0462	Kachiraju Himesh Bharadwaj
17	III- C	16R11A04C7	Naveen Singh
18	III- C	17R15A0429	Narra Moulika
19	III-D	16R11A04H7	Singireddy Revanth Reddy
20	III-D	16R11A04J2	V Akhila
21	III-E	16R11A04L5	Jatin Ekbote
22	III-E	16R11A04P7	Vattem Lalita Yamini

Innovative Projects list AY:2018-19

S.No.	Roll Number	Name of Student	Title of the Project	Name of the Guide
1	15R11A0483	K.S.Veerendernath	Medi - ATM	Prof O.V.P.R Siva Kumar
	15R11A0474	D.V.D.N.Prasad		
2	15R11A0483	K.S.Veerendernath	E-Bin	Prof O.V.P.R Siva Kumar
	15R11A04F6	P.Nikhita Reddy		
	15R15A0408	K Sai Ram Rao		
3	15R11A04C4	B.Siddhartha Goud	Automated Ironing & Folding Machine	Mrs. B.Mamatha
	15R11A04D6	G. Vandana		
	15R11A04G4	G.Roshan Saketh		

a). MEDI - ATM

K.S.VEERENDERNATH (15R11A0483)

D.V.D.N.PRASAD (15R11A0474)

GUIDE
PROF. OVPR. SIVA KUMAR

ABSTRACT

People in villages are suffering from lack of medicines where they have to travel for 2 to 3 kilometres even for basic medicine. They are losing their lives due to lack of minimum medical facilities. Only in developed areas we can find 24*7 medical facilities .But how about remote areas? So here comes our idea which can solve the problem in times of emergency.

The goal of medical stores is to provide medicine for 24*7 hours. But these are available in only certain developed areas. They will develop and refine the basic clinical skills required to provide effective and efficient primary care. Medical stores management should assist m both the flow and reliability of supplies from source to user as economically and reliably as possible and without significant wastage, loss of quality or theft. The primary purpose of a store is to receive ,hold and dispatch stock This materials management process is implemented through inventory control and warehouse management systems, which may be manual or computer based.

Our solution is to set up Any Time Medicine where there is no proper medical infrastructure. It is a self-service machine where patients can obtain their medicines in the same way people withdraw money at an ATM. Medi-ATM will dispense basic medicines without the physical presence of a pharmacist. Medi-ATM displays the list of medicines and it's cost on the screen .User should select the medicine he wants and do the payment. After payment is done machine dispenses the medicines .This way even rural areas can get access to medicines any time with the help of Medi-ATM. This way we can solve the problem of medical facilities in rural areas.

Block Diagram
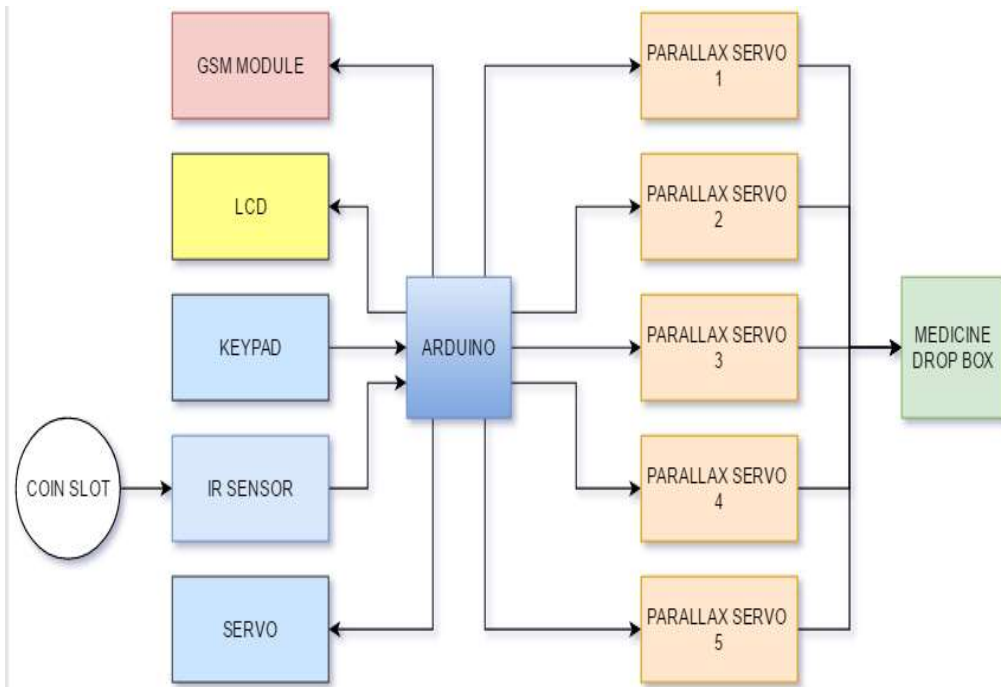
E-BIN

**K.S.VEERENDERNATH (15R11A0483)**
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ABSTRACT

In the recent decades, Urbanization has increased tremendously. At the same phase there is an increase in plastic production. Plastic management has been a crucial issue to be considered. This project is a way to achieve this good cause. In this project, e-bin is built on a microcontroller based platform Arduino Mega board which is interfaced with GSM module and Ultrasonic sensors, when people drop their pet bottle into bin and enter their registered mobile number, bin measures it and send OTP to registered number, once OTP is received by e-bin app in which user already got registered, it retrieves OTP automatically and increment the points, which can be later availed as recharge coupons, discounts and many more. The bin also alert the required authority to squash the bottles when it got filled. Once the dustbin is squashed, people can reuse the dustbin. At regular intervals dustbin will be squashed. Once these e-bins are implemented on a large scale, by replacing our traditional bins present today, plastic can be managed efficiently as it avoids unnecessary lumping of plastic on roadside.The main motto of the project is to inculcate social responsibilities in people and make plastic free society.

Block Diagram
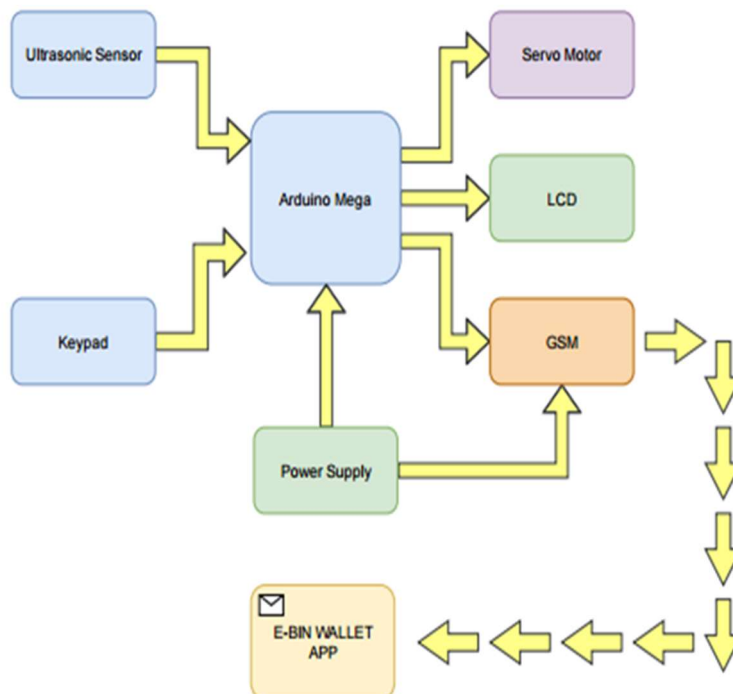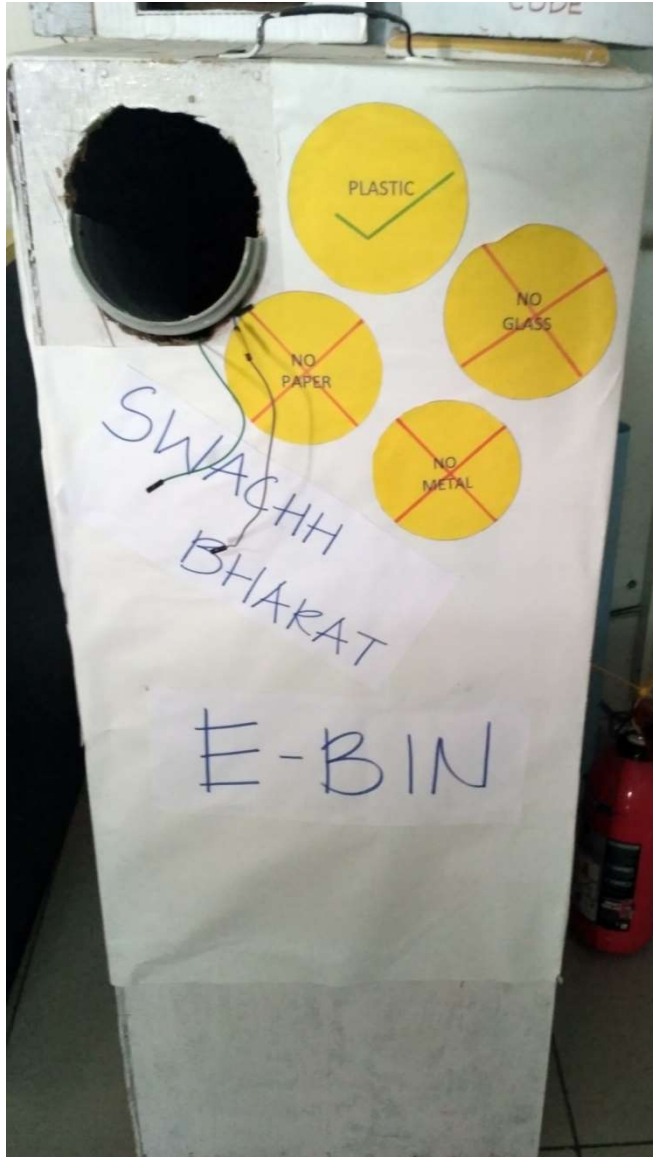
AUTOMATED IRONING & FOLDING MACHINE

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ABSTRACT

This project describes the low cost, automated clothes ironing machine. This machine automatically recognizes the type of cloth material and irons it and gives a neat folded material. In this design we use Arduino/Raspberry pi to control the internal stepper motors, folding mechanism. This can also be designed to detect the type of cloth design (shirt/pant) automatically and manually.

Advantages:

1. Easy to use

2. Saves time of an individual

3. Can be implemented in textile industries

Block Diagram:
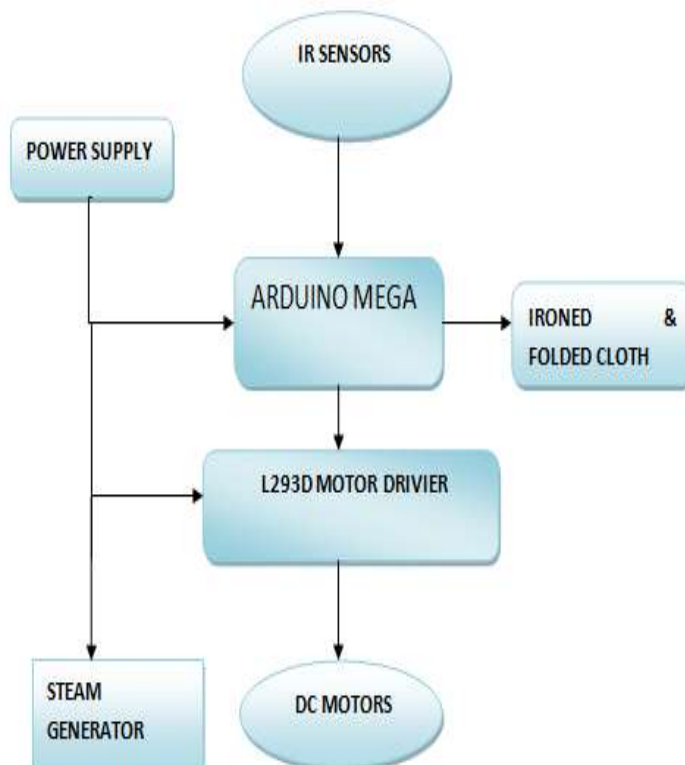
Demo of the prototype of AUTOMATED IRONING & FOLDING MACHINE

JHUB EXCITE - 2018

- **EXCITE 2018**, a five-week Product Engineering, Innovation, and Entrepreneurship program focused on market centered IoT solution for the Second year and Third year engineering students to Ideate, learn cutting-edge skills and implement Product prototypes with the active support from Industry mentors and Startups.

- EXCITE2018 is an initiative of **JNTU** powered by **HYSEA, TASK, Hyderabad Hackers** and **Idealabs** has played a crucial role in being the Knowledge, mentoring and implementation partner for this initiative. The program which kicked off on 20th May concluded on 1st July 2018.