AARIS –Automated Attendance Registering System
Abstract

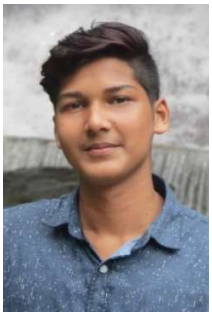
AARIS –Automated Attendance Registering System is software that creates attendance sheet based on CCTV camera footage from each class in an academic institution by recognizing the faces and uploading attendance sheet in time to online database and updating. AARIS focus on creating human free automated attendance registering without time consumption and delay. Current Practices in academic institution for attendance registering are manual method of teachers taking attendance via student calling, Electronic method of Biometrics and RFID tags etc. But the problems faced by these methods are time consumptions since these need a third person or the person need to wait for registering attendance, presence of human error is another factor, and malpractices in physical attendance registers. So for overcoming these problems we look forward to CCTV cameras installed in the college premises and classrooms they are working 24/7 for security purpose. The idea is to find a new purpose for cams by processing live footage, recognize persons sitting inside classrooms through face recognition and make attendance sheet from it and make an online database to store information and can be accessed from online real-time.

AARIS Prototype Development

Team Members

Kevin Mathew George

H Anand



Paul Stanly

Philip Thomas

Stroke Rehab And Exercising Glove

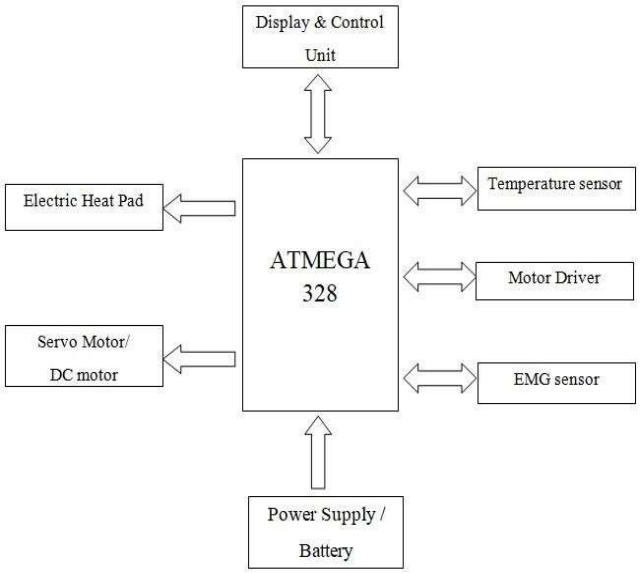
Abstract

In India, more than 70,000 people suffer a stroke each year and approximately two-thirds of these individuals survive and require rehabilitation. Paralysis is one of the most common disabilities resulting from stroke. The paralysis is usually on the side of the body, opposite to the side of the brain damaged by stroke, and may affect the face, an arm, a leg, or the entire side of the body. Even though rehabilitation does not reverse brain damage, rehabilitation can substantially help the affected person to achieve the best possible long-term outcome. Stroke patients may have difficulty with everyday activities such as walking or grasping objects. So we are focusing on implementing a hand glove which provides daily exercising for hand based on signals acquired from electromyography (EMG) sensors and also heating up the paralyzed hand in order to ensure the blood flow, which may otherwise lead to serious health problems.

An ischemic stroke or “brain attack” occurs when brain cells die because of inadequate blood flow. When blood flow is interrupted, brain cells are robbed of vital supplies of oxygen and nutrients. About 80 percent of strokes are caused by the blockage of an artery in the neck or brain. Paralysis is one of the most common disabilities resulting from stroke. The paralysis is usually on the side of the body opposite the side of the brain damaged by stroke. This one-sided paralysis is called hemiplegia. Stroke patients with hemiparesis or hemiplegia may have difficulty with everyday activities. Stroke patients may lose the ability to feel touch, pain, temperature, or position. Sensory deficits also may hinder the ability to recognize objects that patients are holding and can even be severe enough to cause loss of recognition of one’s own limb. Some stroke patients experience pain, numbness, or odd sensations of tingling or prickling in paralyzed or weakened limbs. Patients who have a seriously weakened or paralyzed arm commonly experience moderate to severe pain that radiates outward from the shoulder. Most often, the pain results from lack of movement in a joint that has been immobilized for a prolonged period of time (such as having your arm or shoulder in a cast for weeks) and the tendons and ligaments around the joint become fixed in one position. This is commonly called a frozen joint. Our initiative will help in order to prevent this condition.

Passive movement at the joint in a paralyzed limb is essential to prevent painful freezing and to allow easy movement if and when voluntary motor strength returns. Some muscles on the affected side may become stiff (most often at the wrist, fingers and the ankle) which can limit movement at the joint and some people may develop muscle spasms or a type of stiffness. So this project aims to provide a moving action for hand, including the fingers, based on information acquired from impulses obtained using electromyography (EMG) signals and also providing a heating effect to the hand in order to prevent blood clotting. This is important, because otherwise frozen joints will leads to serious health problems.

The block diagram of the proposed system is given below. The EMG sensor acquires the EMG signals and based on the signals the servo motor will rotate to give the hand the required motion. The temperature is monitored and the electric heat pad provide the heating effect.



Block Diagram

Illustrated Design

Team Members

Amal Chandran

Jephin Baby

Vishnu M

Nut X - Portable Nutmeg Separator

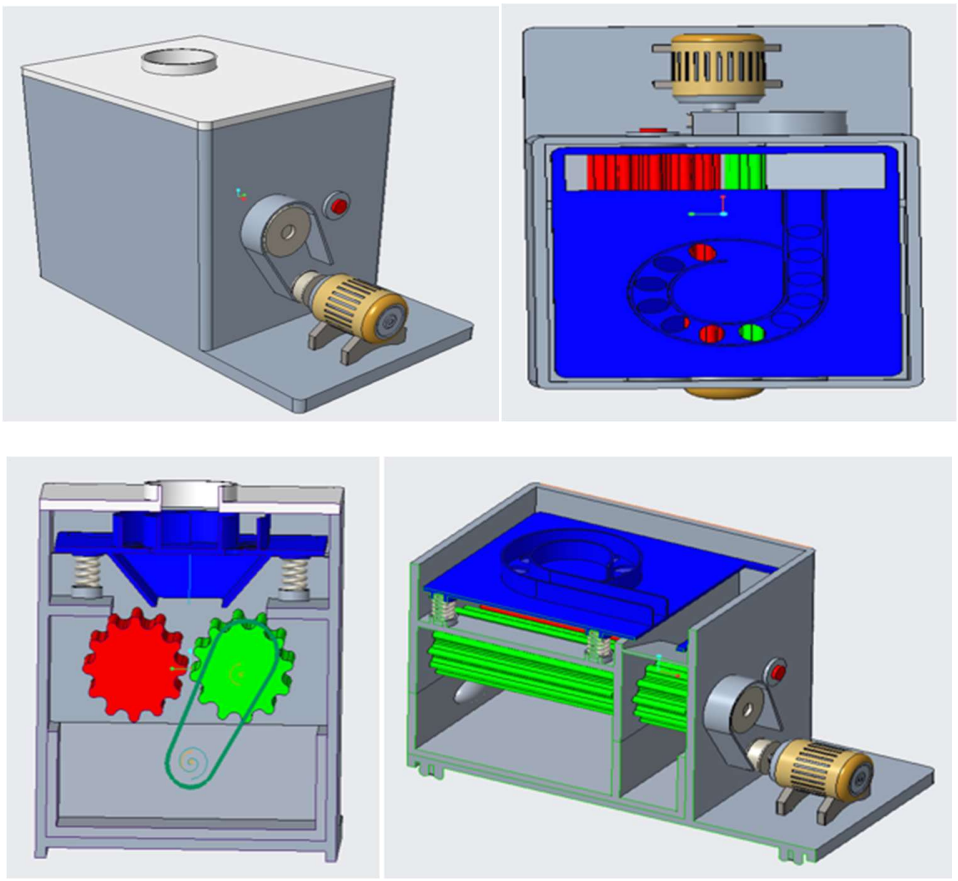
Abstract

Nutmeg is one of the major cash crop in South India. The oil extracted from nutmeg and the nutmeg is a very valuable spice in the entire world, especially in the European countries. Large quantity and variety of aromatic compounds in the seed and mace of the nutmeg have led to the historic and continued use of nutmeg and mace as spices. Products of nutmeg and mace are used in cosmetic and pharmaceutical industries also.

There is a large difference in the price of nutmeg without shell and with the shell. Due to lack of effective machine and high labor intensive process, currently farmers sell the nutmeg with shell. It decreases their earning. As per our studies and discussion with the farmers and industry, we found that the intermediate people in the industry buy it from farmers at a low price and break the shell, then sell it on larger price. By introducing this simple Portable Nutmeg Separator the farmers themselves can crack the shell and earn more income. It reduces the work load and physical stresses of the nutmeg farmers and saves their time as compared with manual cracking. It is affordable to small scale farmers and increases their profit.

Nutmeg is available in various sizes. Sorting of nutmeg must be done before cracking. In the sorting mechanism nut is put in one center section of a vibrating sieve. It is passed over to the curved path based on size. Then the nut is put into the chute. It is fed to different compartments according to the size. Rotor of the nutmeg separator is rotated by the motor. As the rotor hits the nut, it is compressed against the adjustable stationary part of the separator and driving rotor, and the impulse force cause shell to break.The separated nut and shell fall downwards, shell get separated by a sieve and nut is collected in the collection tank.

Expected Outcome of this project will be a creative, portable, economic design of a nutmeg separator which will be very useful to the farmers to carryout the nutmeg cracking on their own an earn more profit. The product ensures safety to the operator and retains quality of the nutmeg. We are planning to include a processing unit with the separator. The Processing unit is to carry out proper drying and sorting.



Design Details of Nutmeg separator

Team Members

Eldhose Raju

Harikrishnan A S

Albin Paul

Jipil P Chettoor

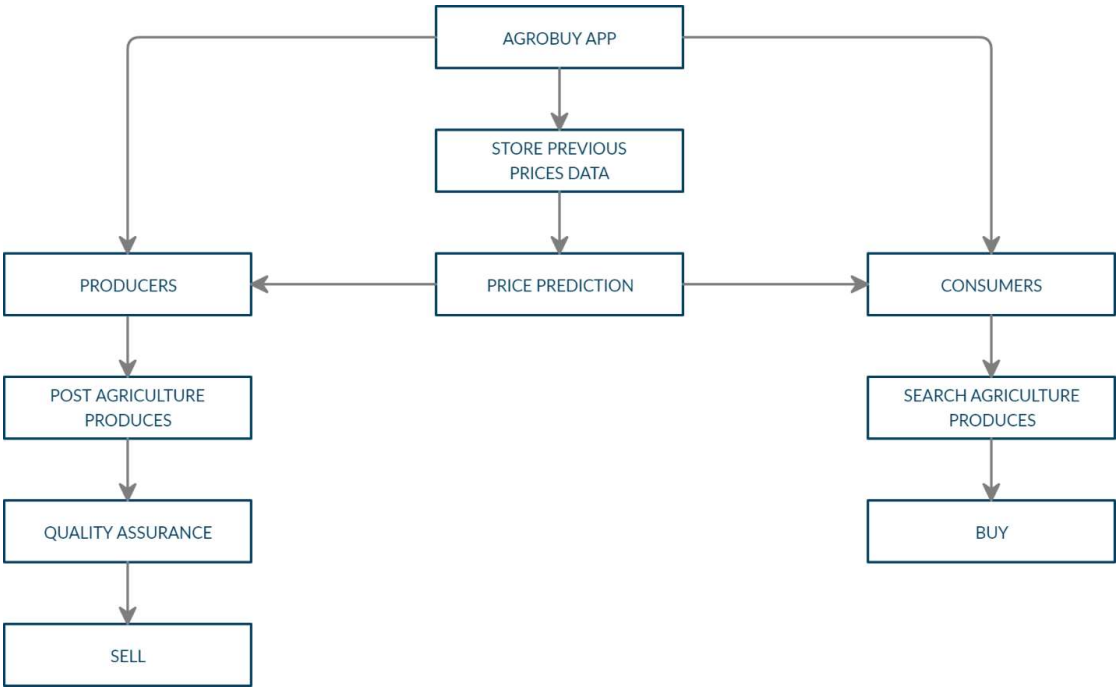
AGROBUY APP *Your Own Market*

Abstract

Agriculture is the primary source of livelihood for about 58 per cent of India's population. Agricultural productivity depends on several factors. These include the availability and quality of agricultural inputs such as seeds and fertilizers, assurance of remunerative prices for agricultural produce and marketing infrastructures. Poor earnings of the farmers led to the never-ending distress of agriculture sector thus results in a need for introducing a national agricultural market.

For the trading of agricultural produce in an online platform, a new app called 'AGROBUY' is designed. Through this app, the farmers can post their agriculture produces with image, quantity and locations information. After a verification process which includes quality check, the agriculture produce is ready for sale and the shop owners or the customers can buy the product at a good price less than the market price. Massive quantities of produces can traded through this app from anywhere around the country. Also there is a future price prediction system is designed for the app so that the producers as well as the consumers can have an eye on the price variations.

This app mainly aim for the farmers to sell their agricultural produces by avoiding intermediate brokers and make them to earn more than what they expect. Not only the products but also the fertilizers and manures or seeds can be afforded at a very low price by using this app. This makes the agriculture sector more secure and reliable by making the prices stable and can thus minimize the farmers' suicides.



AGROBUY APP Block Diagram

Team Members

Thomas James

Paul Mathew

Melvin Shaju

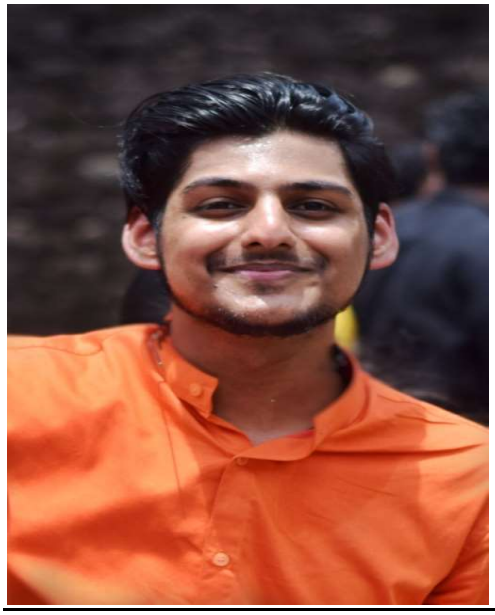
Bencin Benny

Beyond: Connect And Learn

Abstract

Beyond is a platform to communicate, learn and share ideas and insights between different levels of academic community including students, teachers and colleges through in a simple and efficient application. Our project is a productive yet creative environment for users where they can themselves learn a subject in a new, simpler and understandable way. With direct access to our social networking side, they can always connect to other peers or teachers during there learning to have a better understanding of the topics. We also aim to create communities that understand you and aim to teach better through our social networking side of the platform.

Team Members



Rahul Vinod

Amal Shyjo

Amphibious Structure for Lifestocks

Abstract

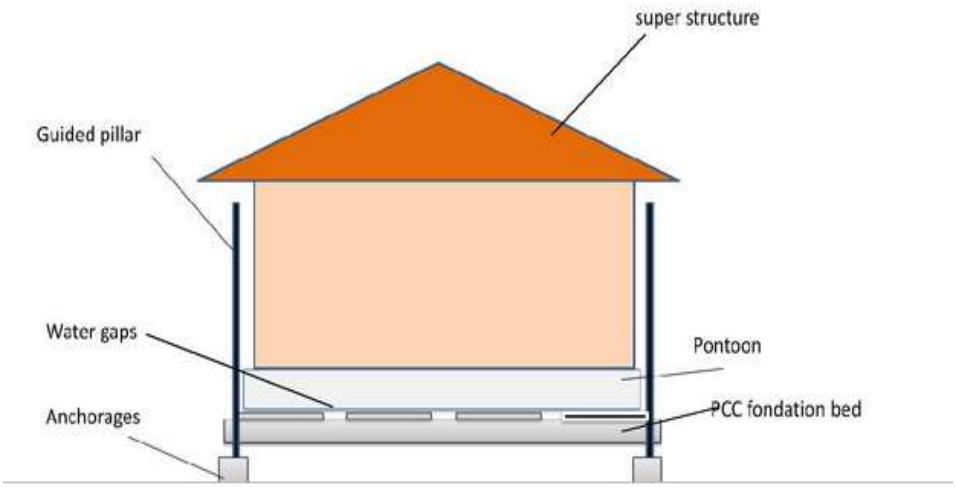
India is a land of peoples who are directly and indirectly dependent on animal husbandry in a wide range from keeping a pet to large farm husbandry's. Climate change and global warming is a primary concern today. Sea levels are rising gradually, along with more frequent and severe hurricanes, flooding, heavy rain and other natural disasters. Proper counter measures are required for survival in such situations in terms of architecture. People living in low lying coastal areas are more susceptible to be affected by flooding.

Disasters often occur when we are least prepared, the floods that occurred in 2018and 2019 were suitable examples for this. But from the past flood experience we have started concerns and preparation to face flood in the future. At present several measures are adopted in construction to construct flood mitigation structures.

So far studies are conducted and several measures are adopted for human safeties, but when it comes to animal safety during floods zero efforts are taken. The only option opted nowadays is to release them freely but those animals grown in closed environment his surely had to face a hard time in the time. This is not only concerned about animals but a whole society dependent on them.

Our project brings out a new innovative idea named amphibious structure for livestock’s. Here we are adopting the idea of a pondoon based foundation which can freely lift or float over water surface along a set of pillars. Stability of the body is attained by correction of center of gravity. This project also includes a system for hazardous time feeding and waste management system.

AMPHIBIOUS CAGES



Team members

Abhinand S

Ajwin Jose

Francis Charles

George Rahul Raj

Idea Fest Winners

Viswajyothi College of Engineering and Technology
Innovation and Entrepreneurship Development Centre
VJCET Idea Fest-2019

Ref: VJCET/IEDC/KKR/2019 / 31 Dt. 13.11.2019

Innovation and Entrepreneurship Development Centre (IEDC) in association with Viswajyothi Business Incubation Centre (V-BIC) of Viswajyothi College of Engineering and Technology had organized Idea Fest-2019 during the last week of October 2019. This event had focused exclusively on innovative technology based idea of students for developing a prototype or product. Following teams are selected as winners of Idea Fest-2019. IEDC will provide them financial support upto Rs.5000/- for prototype development.

Sl. No.	Title of Idea	Team Members	Class
1.	Beyond Connect & Learn (A learning platform to link Academic Community)	Rahul Vinod Amal Shyjo	S5 IT
2.	Automated Attendance Registering System (AARIS)	Kevin Mathew George, Philip Thomas Anandh H Paul Stanly	S5 EEE B
3.	Amphibious Cage (Flood Shelter For Live Stock)	Abhinand S, Ajwin Jose Francis, Charles George, Rahul Raj	S7 CEB
4.	Agrobuy App (IT based marketing of agricultural products)	Thomas James	S7CSA
5.	Stroke Rehab & Exercising Glove	Jephin Baby Vishnu M Amal Chandran	S7 ECB
6.	Portable Nutmeg Separator	Jipil P Chettoor Eldhose Raju Albin Paul Harikrishnan A S	S7 ME B

Dr. K.K.Rajan,
Nodal officer , IEDC ,
Viswajyothi College of Engineering and Technology,
Vazhakulam, Muavattupuzha,

Student Startups

Sl.No	Name of Startup	Lead Entrepreneur	Contact Details
1.	M/S Mj Kreatives	Shri Mohid Antony Jimmy	9947311028 mohithantonygimmy@gmail.com Department of Electronics & Communicatio Engineering Fourth year
2.	M/S Volta Innovations	Shri Basil Eldhose	7034415204 basileldhose618@gmail.com Department of Electrical and Electronics & Engineering Second year
3.	M/S Bellagio Digital Store	Shri Bennet Joy	9895954971 bennetjoy03@gmail.com Department of Information Technology First year
4.	M/S Beyond	Shri Amal Shyjo	*amalshyjo@gmail.com* Department of Electronics & Communications Engineering Third year
5.	M/S LET Innovations	Shri Jins Jolly	6238843310 jincekallarackan@gmail.com Department of Electronics & Communications Engineering Fourth Year
6.	M/S Wellctron	Shri Biju Narayanan	9495337268 bijukn1970@gmail.com Department of Electronics & Communications Engineering Parent

To Register New Startup

Download Registration form

Innovation and Entrepreneurship Development Centre

Viswajyothi College of Engineering and Technology
Vazhakulam, Muvattupuzha,
Kerala, India- 688667

Application for Registration of a Startup under IEDC of VJCET

For Office Use Only
Received Date:

1. **Name of Business (Company) :**

2. **Lead Entrepreneur** (A separate resume may also be attached)

Full Name :

Age :

Class :

Branch :

Res Phone :

Mobile :

Email :

Postal address :

3. **Type of Business :** Services/ Manufacturing Technology/ IT/Other

4. **Briefly description of business:** Attach separate sheet, if required

5. **Present status of the business? :** Conceptual Stage/Existing

   If yes, No. of years :

6. **Why you want to become an entrepreneur? :** (Add separate sheets, if required)

7. **Details of your team members :**

7.1 Name :
Class :
Mobile No. :
E mail ID :
Postal Address :

7.2 Name :
Class :
Mobile No. :
E mail ID :
Postal Address :

7.3 Name :

Class :
Mobile No. :
E mail ID :
Postal Address :

8. **Number of employees you will be employing :**

9. **Briefly describe the company and product/Service offered :**

10. **Novelty of your product/Service :**

11. **Who are your competitors and what is your competitive advantage:**

12. What is the potential market size for your product :

13. Do you need any machinery or capital item for starting of your venture? If yes, please specify the same with the purpose:

14. Have you done market survey on the demand for your product? If yes, Give details.

15. Estimated project cost in details

Pre-operative expenses	Rs.
Prototype Development	Rs.
Test & Marketing	Rs.
Test & Marketing	Rs.
Working Capital	Rs.
Other Requirements	Rs.
Total	Rs.

16. List of services Expected from IEDC:

Laboratory access :

Library access :

Market assessment/feasibility :

Techno-economic study :

Process/product development :

Product evaluation & bench marking :

Advisory services :

Infrastructure requirement for space :

If other facility needed, please specify :

17. References:

17.1 Name

Organization/ Designation

Address

Phone

Email

17.2 Name

Organization/ Designation

Address

Phone

Email

Declaration

The information that I/we have provided is correct. I further declare that the information that I have provided herewith are not proprietary in nature and that I would not make any claim on same

Signature of Applicant(s)

Place :

Date :

Hard copy may be sent to: Nodal officer, IEDC, Viswajyothi College of Engineering and Technology Vazhakulam, Muvattupuzha, Kerala, India

Online Registration

Link : https://forms.gle/uWaSVpTx8wWsVt7H9

Mentoring Scheme

Viswajyothi College of Engineering and Technology

Innovation and Entrepreneurship Development Centre (IEDC)

Mentoring Scheme for Student Entrepreneurs

Ref: VJCET/IEDC/2019-2020/07 **Date: 02.12.2019**

As per Kerala Start up Mission guidelines, arranging interaction with entrepreneurs and creating a mentorship scheme for student entrepreneurs is one among the Functions of IEDCs in the academic institutions. Accordingly IEDC of academic institution shall a create a pool of internal & external mentors for supporting entrepreneurs in the college. The pool shall consists of external mentors and internal mentors selected for assisting startups. The IEDC shall organize minimum eight numbers of mentoring programs in an year.

Based on this guidelines following personalities are selected in the pool of mentors in Viswajyothi college of Engineering and technology towards effective interaction and mentoring of student entrepreneurs.

Internal Mentors

Internal Mentors

Internal Mentors	
 Mr. Aneesh Kurian Assistant Professor, EEE & Entrepreneur Area of interest : Electrical system design, Electrical Machines, Solar Plant Systems, Water Treatment Systems E mail: aneeshpulpally@gmail.com Mobile : 9946936642	 Dr K K Rajan Prof EEE & Dean IIIC Area of interest : Core Electrical Engineering Hardware, Design, Engineering, and Manufacturing, Power system, Solar Energy E mail : kkrajan56@gmail.com Mobile : 9072964417
 Mr. Prince Kurian Assistant Professor, ITD Area of interest : Web Technology & Designing E mail: Princekurian2000@gmail.com Mobile : 9846952048	 Dr. Sheela.V.K Assistant Professor, ITD Area of interest : Data Management & Image Processing E mail: sheelavk@vjcet.org Mobile : 9447048524

Ms. Tina Jose
Assistant Professor - CE
Area of Interest :Structural Engg
E mail : tinatresajose@gmail.com
Mobile : 9495675447

Ms. Neena M Joseph
Assistant Professor - CE
Area of Interest: Transportation Engg
E mail : neenmariya@yahoo.co.in
Mobile : 9447876078

Mr. Joe Mathew Jacob
Assistant Professor, CSE Dept, VJCET
Area of Interest : Computer Networks
joemj@vjcet.org
Mobile : 9497818504

Mr. Sivadas T Nair
Assistant Professor, CSE Dept, VJCET
Area of interest : Data Mining, Computer Architcture
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Mobile : 9447349948

Mr. Tony D
Associate Professor, ECE Dept., VJCET
Area of interest : Antenna Design
E mail: pdtony@gmail.com
Mobile : 9497680830

Mr. Cyriac M Odackal
Associate Professor, ECE Dept., VJCET
Area of interest : Microwave Electronics
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Mobile : 9447506638

Mr. Vinoj K
Associate Professor, Mechanical Engineering Department
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Mobile : 9847411887

Mr. Arun K
Assistant Professor, Mechanical Engineering Department
Area of interest : Manufacturing Engineering
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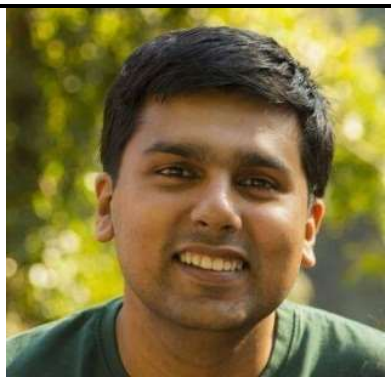
Mobile : 9946447403

External Mentors

External Mentors	
 Dr. K. C. Chandrasekharan Nair Co-founder of Technopark Trivandrum, former CFO,Techno park and Secretary & Registrar, Technopark TBI Area of interest : Expert in Startup Development, Father of Startup Mission in Kerala , E mail: kccnair@gmail.com Mobile : 9447111244	 Mr. Manu John James EO & Founder, Empower Engineers Area of interest : Electrical System Design E mail: Mobile : 9447377101
 Mr. Baby George, Managing director, G & G Constructions Area of interest : Urban & Regional Planning, Project planning & Management, Building Construction E mail: babygeorge.george@gmail.com Mobile : 944650117	 Mr. Gopikrishnan Director, BuildNext Construction Solutions Pvt. Ltd Area of interest : Green buildings, Buildings materials, Entrepreneurship E mail: gk@buildnext.in Mobile : 7506033510

Mr. Jaacs Job Pottas
Co-Founder & CTO End to end IoT solution development, Terraconnect Pvt. Ltd
Area of interest : Custom Hardware, firmware, cloud back-end and Front End design and development, IoT rule engine development, IoT framework development, working on open source technologies
E mail: jaacs@terraconnect.io
Mobile : 9207742587

Mr. Varghese Benny
Founder and CEO, Rabbitsquare, First Floor, Karakunnel Building, Near MKNM Higher Secondary School, Kumaramangalam, Thodupuzha, Kerala 685608
Area of interest : Robotics,IoT, Cybersecurity, STEM education
E mail: varghesekbenny@gmail.com
Mobile : 8086967146

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Co-founder and CTO
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Mr. Sunil Kumar V
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