

## MYSORE CENTER

# BEYOND THE FENCE: A SMART APPROACH TO PROTECTING BOTH PEOPLE AND ELEPHANTS

## PROBLEM STATEMENT

Growing human populations and shrinking forest cover are creating an escalating crisis: increasing conflicts between farmers, communities, and wildlife. Elephants, in particular, face habitat loss and fragmentation, pushing them into closer contact with human settlements and agricultural land. This collision course breeds fear and frustration for farmers and communities, while potentially causing harm or displacement for these magnificent animals. The current metric of conflict resolution is reactive, not proactive: we scramble to fix the damage after clashes occur. We need a paradigm shift towards preventative measures that safeguard both human lives and wildlife.

## TEAM MEMBERS



**Shreyansh Srivatsav**  
**Sholarson Thokchom P**  
**Yash Nema**

**Saloni Kumari**  
**Satish Sanoujam**  
**Shuvam Sharma**

## SOLUTION

As soon as an elephant or group of elephants enter the radar of the sensor ecosystem, it transmits this data to the nearest speakers and tells the light to rotate in the direction of elephant. After the detection process it will start generation of sound of bees and other sounds that make elephants uncomfortable which will scare away the elephants. It will also generate flashes of bright lights at night time. Alongside it will send an emergency alert to nearby authorities & locals informing them of the incident.



## MYSORE CENTER

# EFFECTIVE MANAGEMENT OF GARBAGE COLLECTION

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## PROBLEM STATEMENT

Overflowing bins and littered streets tell a troubling story: household waste isn't getting collected reliably. This unscheduled buildup not only creates eyesores and hygiene problems but also wastes valuable resources due to inefficient allocation. Despite persistent challenges in waste disposal, how can we streamline and guarantee the daily collection of household waste by municipal workers?

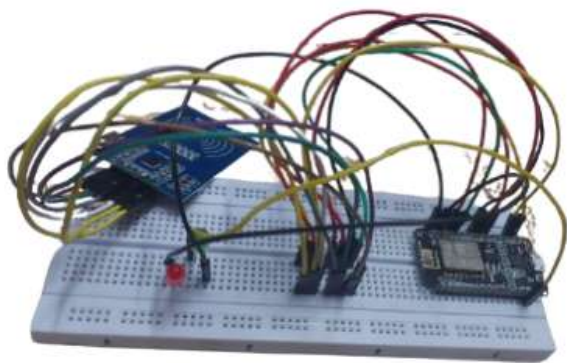
## TEAM MEMBERS

**RAJESHWARI H R**  
**MONIKA R**

**PRAKRUTHI M B**  
**SANJAY**  
**SUDEEP**

## SOLUTION

RFID reader connected to the antenna wirelessly and receives data from the RFID tag. It uses radio waves to transmit signals that activates the tag, once activated, the tag sends a wave back to the antenna. It transmits stored data to antenna. It receive stored data from the tag and transmit the data to an RFID reader. The computer data base transmitted into the RFID database where it can be stored and evaluated. It is possible to grasp the running dynamics of the vehicles, monitor whether the garbage trucks are collecting and operating routes in real time, and monitor the collection tasks in a refined and real time manner. In this way, the management efficiency of each link in the sanitation operation can be greatly improved, the work efficiency can be improved, and the management cost can be reduced.



## MYSORE CENTER

# FIRE EXTINGUISHERS

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## PROBLEM STATEMENT

Often reliant on manual activation, traditional fire extinguishers miss the crucial first moments when flames ignite, giving fire a head start. Untimely failures or unreliable sensors can create confusion and disrupt response times, potentially delaying action. Misinterpreting normal activity as a fire can trigger unwanted alarms, leading to unnecessary panic and resource allocation.

## TEAM MEMBERS

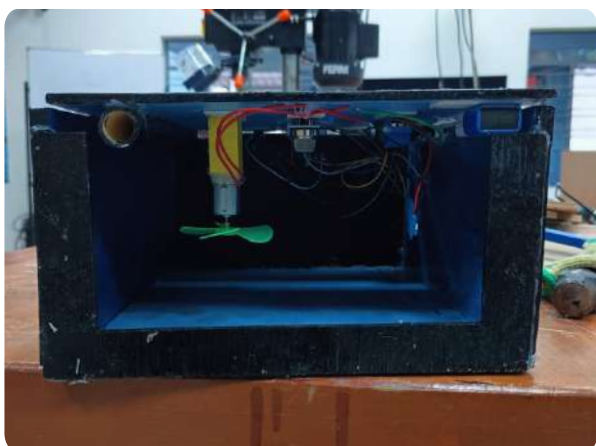


**S VISHANTH**  
**MOHITH S**  
**SATYADUTT MS**

**NEHA MN**  
**SHRILAKSHMI MA**

## SOLUTION

In the current situation, the existing solution acts as fire alarm but not as fire extinguishers. Industries (far off the urban areas having less habitat), apartments, houses and everywhere and almost at every instant.



## MYSORE CENTER

# INCLUSIVE BOARD GAME FOR THE BLIND

## PROBLEM STATEMENT

For the visually impaired, the world of board games often remains shrouded in darkness. Traditional games rely heavily on visual cues, leaving them stranded at the starting line, unable to grasp the board layout, comprehend rules, or truly participate. This exclusion denies them the joy of strategy, camaraderie, and playful competition. We need a revolution in game design that unlocks the world of board games for the visually impaired, crafting experiences that are both accessible and exhilarating.

## TEAM MEMBERS



**RANADHEER**  
**MOURYA**  
**ADVAITH**

**NSURYA JAIN**  
**MRUTHYUNJAYA**  
**NISHANTH**

## SOLUTION

Entertaining the blind people the game board has a high-contrast design, with distinct color differences between the tiles and the background to aid visibility. Large, bold letters are embossed on the tiles to enhance visibility for players with low vision. Provision of clear and concise written and audio instructions in accessible formats, ensuring that players can easily understand and participate in the game. There is a tactile indicator, like a bump or groove, on the starting square to help players locate the beginning point easily.



## MYSORE CENTER

# COMMUNITY EMERGENCY RESPONSES.

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## PROBLEM STATEMENT

Disasters often strike when we need communication the most. But severed networks and disrupted infrastructure leave communities isolated and desperate, hindering essential information flow and jeopardizing the rescue and recovery of those in need. How can we equip society to overcome these communication roadblocks and navigate disasters with efficiency and compassion?

## TEAM MEMBERS



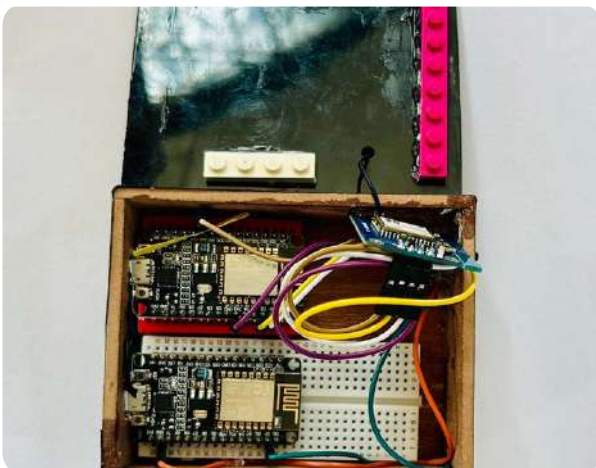
**Yuktheesh R S**  
**Saith Prakash**  
**Suyajnaa Jagannath**

**Shikhara T kesthur**  
**Padmanabh**  
**Neethu Reddy Y**

## SOLUTION

By using Arduino to code the NodeMCU ESP8266( wifi module ) which is connected to the cloud and GPS module with receiver which gets a signal from satellite , through which we can get the location in our phones .SoS system integrated in a watch which is paired with a ring.

A watch which has a Inbuilt SoS system which sends a message to whomsoever it may be concerned about their location, problem severity, with few features such as buzzer, light, etc., to help the victim to be located easily



# MANGALURU CENTER

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BANGALURU

[www.comedkares.org](http://www.comedkares.org)

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## MANGALORE CENTER

# AUTONOMOUS ROBOT WITH ACCIDENT PREVENTION SYSTEM

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## PROBLEM STATEMENT

The project aims to enable the robot to navigate unknown environments, detect obstructions based on a predetermined threshold distance, and autonomously shift its trajectory to avoid collisions. The robot should operate without external control, measure real-time distances from obstacles, and potentially incorporate Bluetooth and voice control options.

## TEAM MEMBERS



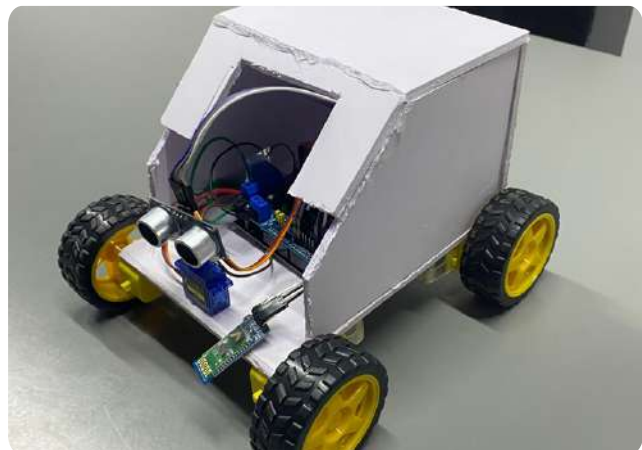
**Divyanidhi rai, EC**  
**Deekshith s, EC**  
**Hitha shetty, EC**

**Preethi Prabhu.k, EC**  
**Sagar Pingle, EC**  
**Santosh Kumar, EC**

## SOLUTION

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The team has developed an obstacle avoiding arduino robot with bluetooth and voice control for automatic obstacle detection and avoidance. Utilizing an ultrasonic sensor for obstacle avoidance, the robot seamlessly maneuvers through its environment. Bluetooth technology, facilitated by the HC-05 module, enables smartphone app control, providing a user-friendly interface. Additionally, the robot responds to voice commands, further enhancing its versatility.



## MANGALORE CENTER

# RESQ-BOT: A VERSATILE SMART DEVICE FOR HAZARDOUS SEARCH AND RESCUE OPERATIONS

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## PROBLEM STATEMENT

As natural disasters and hazardous situations become increasingly prevalent, there is a pressing need for a sophisticated rescue operation robot. Traditional rescue methods are often hindered by dangerous conditions, making it imperative to develop a versatile and efficient robotic solution capable of navigating challenging environments to save lives and mitigate risks.

## TEAM MEMBERS

**Harshitha G, EC**  
**Deekshith C Achar, EC**  
**Prashank Poojary, EC**

**Megharsha M s, EC**  
**Shreya, EC**

## SOLUTION

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The Raspberry Pi-powered rescue robot is a solution equipped with ultrasonic and IR sensors for enhanced disaster response. Using Raspberry Pi's computing prowess, it can navigate environments, detecting obstacles through ultrasonic and IR sensors. Powered by a LIPO battery, this agile robot ensures extended operational capabilities, providing a reliable and versatile tool for rescue operations in challenging and dynamic scenarios.





## MANGALORE CENTER

# RECON ROVER : A ROBOT FOR MILITARY APPLICATIONS

## PROBLEM STATEMENT

The problem at hand revolves around the heightened risks and challenges encountered by human soldiers in contemporary military operations, particularly in hazardous and unpredictable settings. The absence of autonomous robotic systems proficient in surveillance, reconnaissance, and tactical functions hinders operational efficiency, jeopardizing the safety of military personnel. Addressing this gap is imperative for enhancing mission success and minimizing human casualties.

## TEAM MEMBERS



**NSyed Nabeel Hussain    Aadil Nazeera Gundagi**  
**Mohammed Fayeem        Mohammed Thahseen**  
**M H Muhammad Rizwan**

## SOLUTION

The military robot integrates key hardware and software components. Hardware features encompass advanced computer vision for object detection using Raspberry Pi 4, poison gas sensing, versatile mobility, and infrared sensors. Software elements include real-time algorithms for object detection, gas identification, mobility control using ultrasonic sensors.



## MANGALORE CENTER

# ARECA NUT SORTING MACHINE FOR THE ARECA NUT HARVESTERS

## PROBLEM STATEMENT

The current manual sorting of Areca nuts poses challenges for harvesters, being labor-intensive, time-consuming, and inconsistent, impacting productivity and quality. Efficient segregation based on size, color, and quality is challenging, affecting market value. To address this, there is a critical need for an automated Areca nut sorting machine. This solution aims to streamline the process, boost productivity, and ensure consistent quality, ultimately enhancing market competitiveness and alleviating the persistent challenges faced by Areca nut harvesters.

## TEAM MEMBERS

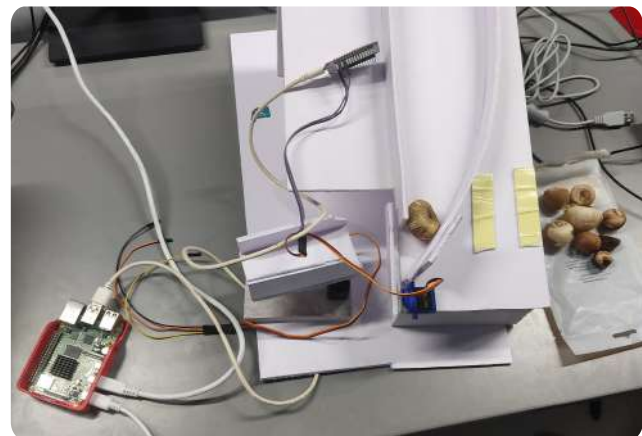


**Sujnan Kumar, EC**  
**Nishanth, EC**

**Vijay, EC**  
**Gowri P Shetty, EC**  
**Kishan S S, EC**

## SOLUTION

The automated arecanut sorting machine represents a transformative shift from manual methods, harnessing the power of automation, including technologies like computer vision, sensors, and Raspberry Pi. This integration ensures precise sorting based on size, color, and quality, minimizing errors and elevating end product quality. By automating the process, it reduces labor requirements, accelerates processing speed, and contributes to long-term cost savings, exemplifying a modernized and economically sustainable approach to agricultural processes.



## MANGALORE CENTER

# GESTURE BASED COMMUNICATION SYSTEM FOR DUMB, DEAF

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## PROBLEM STATEMENT

Existing hearing impairment solutions suffer from insufficient user satisfaction due to challenges like inaccurate speech recognition, discomfort from bulky devices, and a lack of seamless integration into daily life. These limitations impede the effectiveness and acceptance of current solutions, significantly affecting the quality of life for individuals with hearing impairments. Addressing these issues is crucial for developing more effective and user-friendly solutions that can genuinely enhance the lives of those with hearing challenges.

## TEAM MEMBERS



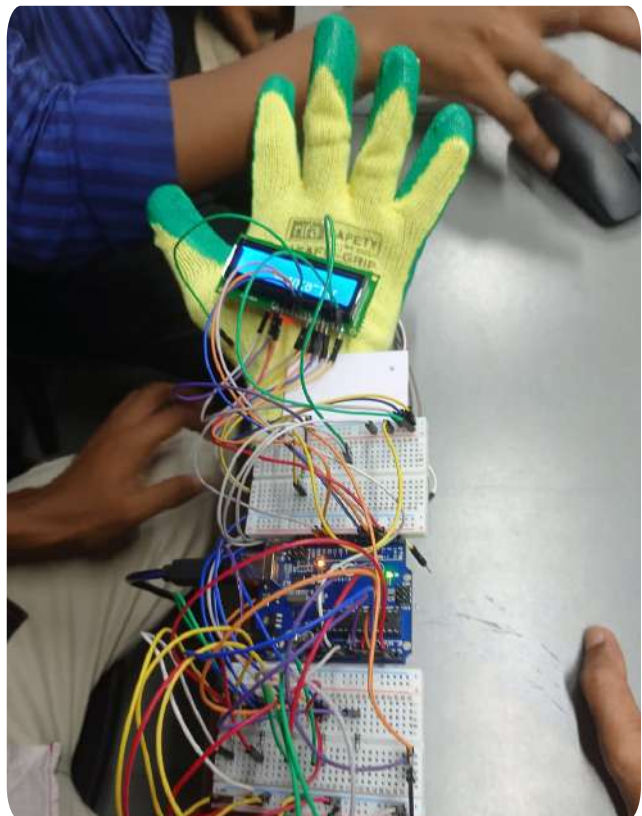
**Kanishk D Amin, EC**  
**Ajeeth, EC**  
**Adarsh.N.Manjrekar, EC**

**Reshma S, EC**  
**Nishanth gowda CJ, EC**

## SOLUTION

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The Gesture-Based Communication System, tailored for individuals with hearing and speech impairments, focuses on the deaf and mute community. Employing flex sensors positioned on a wearable glove, the system adeptly captures and interprets intricate hand gestures inherent to sign language. Enhancing communication, the system integrates an LCD display for real-time feedback. This innovative project holds promise in bridging communication gaps and empowering individuals with hearing and speech impairments to express themselves effectively through the use of gesture-based technology.



## MANGALORE CENTER

# GARBAGE SEGREGATOR

### PROBLEM STATEMENT

The challenge at hand is to create an efficient waste segregator system capable of automatic and accurate classification of mixed waste items into distinct categories. Currently, the absence of such a system hinders effective waste management. There is a pressing need to address this issue by developing a technology-driven solution that streamlines the waste segregation process, ensuring precision and facilitating proper disposal or recycling of different waste types. This problem statement underscores the demand for an innovative approach to enhance waste management practices.

### TEAM MEMBERS



**Nithin M.R, EC**

**Alfred Jeevan Dsouza, EC**

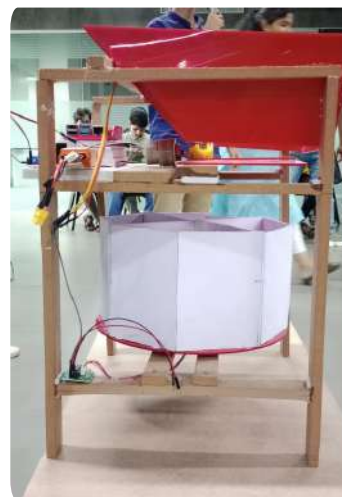
**Deeksha D Shetty, EC**

**Swathi singh, EC**

**Sayyad Arif, EC**

### SOLUTION

The waste management solution incorporates waste segregators with a sorting mechanism, driven by a Raspberry Pi board for motion control. This design enables efficient segregation of organic, recyclable, and non-recyclable materials at the source. Implemented in households and businesses, it promotes environmental conservation, community engagement, compliance with regulations, and resource recovery. The Raspberry Pi-driven system reduces landfill usage, ensuring a sustainable and responsible waste management approach.



## MANGALORE CENTER

# MULTI PURPOSE WHEEL CHAIR

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### PROBLEM STATEMENT

Manual wheelchairs pose challenges for users, impeding mobility and independence. Issues include strenuous self-propulsion, limited terrain adaptability, and inadequate ergonomic design. These shortcomings hinder daily activities, compromise user well-being, and demand a more innovative, user-centric approach to enhance the functionality and comfort of manual wheelchairs.

### TEAM MEMBERS



**Keerthiraju S R  
PRAKASH**

**B V Deepika Shetty  
Muhammed Aman C**

### SOLUTION

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Empowering independence, the Multipurpose Wheelchair is a cutting-edge, motion-controllable system that integrates crucial health monitoring features. A continuous Heart Rate Monitor, coupled with a pulse sensor connected to an Arduino Uno, tracks vital signs. Further, dedicated Temperature and Humidity Monitoring Systems enhance the user-centric healthcare approach. By incorporating controllable wheelchair features, this holistic solution prioritizes autonomy, aiming to elevate the well-being and mobility of individuals.



## MANGALORE CENTER

# MEDICINE DELIVERY BOT: ENHANCING SAFETY AND EFFICIENCY IN ISOLATED PATIENT CARE

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## PROBLEM STATEMENT

Addressing the need to minimize disease spread and reduce patient–healthcare worker interactions, the challenge arises when healthcare workers must personally deliver medicines to isolated, infected patients. The stakeholders, patients, and hospitals aim to enhance safety. The current metric involves healthcare workers delivering medications, but the goal is to implement a bot capable of transporting medicine and food. This aims to prevent healthcare workers from potential infection, all while considering financial and material constraints.

## TEAM MEMBERS



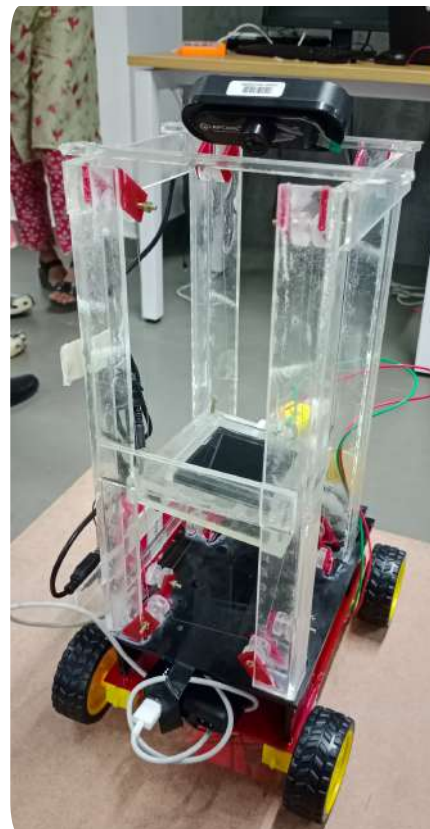
**Kartik Maruti Shetti**  
**Neha Dinesh**

**TP Vishwanath Shenoy**  
**Drishya Devanand**

## SOLUTION

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Their innovative solution involves the creation of a HealthCare Delivery Bot, powered by Raspberry Pi, to counter workforce shortages amid the COVID-19 pandemic. This robot adeptly handles healthcare tasks like delivering medications and PPE, mitigating infection risks and easing the strain on healthcare workers. Equipped with autonomous navigation capabilities through sensors and cameras, the bot ensures safe and efficient deliveries, embodying a practical and technological response to the challenges posed by the pandemic, benefitting healthcare facilities and their personnel.



## MANGALORE CENTER

# AUTOMATED VEHICLE CHARGER: AUTOMATED CHARGING FOR SEAMLESS EV CHARGING EXPERIENCES

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## PROBLEM STATEMENT

The challenge lies in the difficulty faced by new electric vehicle users in comprehending the charging process, coupled with potential time wastage due to insufficient staff at charging stations. Despite the presence of components and stations, a need arises to contribute to charging station owners and electric vehicle users by introducing automated charging equipment with robotic arms. The current manual charging method poses delays, and the goal is to transition to an automated system, benefiting both vehicle owners and station operators by minimizing waiting times, subject to component and station availability.

## TEAM MEMBERS

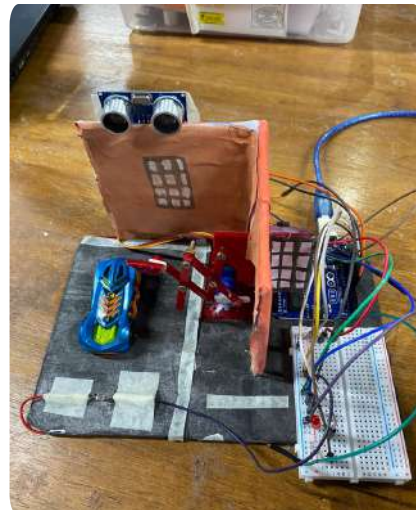
**Gurudeep**  
**Ankitha**

**Sejal D**  
**Sinchana bangera m**

## SOLUTION

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The vision of automated vehicle chargers autonomously navigating to the vehicle ports for charging promises a transformative future for electric vehicle (EV) charging infrastructure. Anticipated outcomes include optimized space utilization at charging stations, potentially enabling more points in congested urban areas. The automated system's precision in aligning with charging ports is expected to enhance efficiency, facilitating faster and more effective charging sessions. Reduced human intervention promises seamless and cost-effective charging, while prioritizing safety through robust system design ensures the well-being of both vehicles and pedestrians in the charging station vicinity.



## MANGALORE CENTER

# SEMI-AUTONOMOUS TRASH COLLECTION BOT: ADVANCING URBAN WASTE MANAGEMENT.

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## PROBLEM STATEMENT

The pervasive issue of floating waste in rivers signifies a critical environmental concern. Widespread disposal of non-biodegradable materials, particularly plastics, threatens aquatic ecosystems, degrades water quality, and endangers biodiversity. This escalating problem requires immediate attention to mitigate its detrimental impact on rivers, urging effective waste management solutions and heightened public awareness.

## TEAM MEMBERS



**Charan**  
**Gopalakrishna B**  
**ANIRUDDHA WAGLE K**

**Sathwik M S**  
**KSHITHIJ H S**  
**Sanjay**

## SOLUTION

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The team has engineered a prototype conveyor belt system to establish an efficient collection mechanism for addressing the challenge of floating waste in rivers. This innovative technology utilizes an automated conveyor belt, enabling the robot to navigate river environments and effectively gather debris, particularly plastics. The prototype represents a significant step forward in addressing environmental concerns and underscores the potential impact of student-led initiatives in waste management.





## MANGALORE CENTER

# AUTO SAFETY ROBOTIC BOT: PROACTIVE COLLISION AVOIDANCE SYSTEM

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## PROBLEM STATEMENT

The core objective is to design an Arduino-integrated vehicular robot dedicated to preventing accidents with static obstacles. The project focuses on mitigating collisions with stationary elements like poles or barriers. The aim is to furnish these robots with advanced systems for obstacle detection, collision risk assessment, and autonomous maneuvering to avert accidents. This demands a resilient system integrating sensors, responsive controls, and precise algorithms for instant obstacle recognition and ensuring secure navigation on the road.

## TEAM MEMBERS

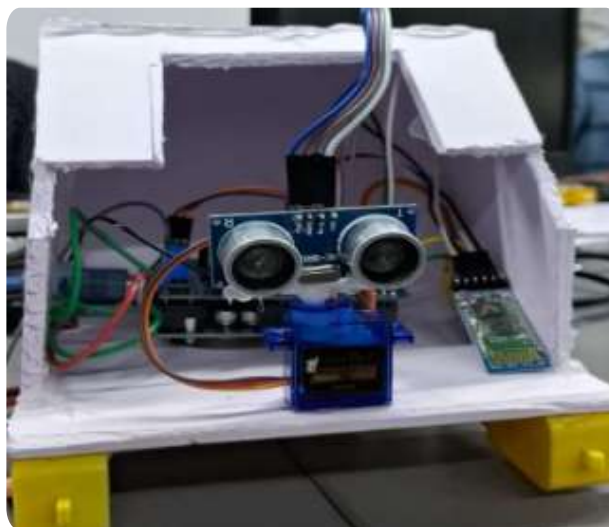
**Divyanidhi Rai**  
**Sagar Pingle**  
**Santosh Kumar**

**Hitha Shetty**  
**Preethi Prabhu.k**  
**Deekshith. S**

## SOLUTION

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The Arduino-integrated vehicular robot features an advanced accident prevention system for static obstacles, utilizing sensors for environment detection. With swift responses like stopping or changing direction upon detecting obstacles, this system enhances safety and reliability. Ideal for autonomous navigation, security, and automation, it significantly reduces accident risks and ensures efficient operation in static obstacle-filled environments.



## MANGALORE CENTER

# AUTOMATED SORTING SYSTEM FOR INDUSTRIAL PROCESSES

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## PROBLEM STATEMENT

Creating an automated sorting system presents the complex task of seamlessly integrating into industrial workflows. The system must adeptly classify diverse materials or products based on predetermined criteria, requiring precision, speed, and adaptability to accommodate fluctuating production demands. Ensuring efficient and error-free sorting within industrial processes is paramount for streamlined operations. This multifaceted challenge demands a solution that harmonizes with dynamic production environments while upholding the accuracy and speed required for effective material or product categorization.

## TEAM MEMBERS



**Dhanush shetty**  
**Harismitha**  
**Vinith kamath G**

**Charan Raj B H**  
**Shashank hr**

## SOLUTION

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The Automated Sorting System, utilizing Raspberry Pi, OpenCV, DC motors, and servo motors, offers an efficient solution for color-based object sorting in industrial processes. This automated system addresses the needs of diverse industries such as manufacturing, logistics, and recycling. With Raspberry Pi as the core controller and OpenCV facilitating precise color recognition, the system streamlines sorting operations. Its versatility makes it a valuable asset across various sectors, providing an innovative and adaptable approach to enhance efficiency in industrial processes.



## MANGALORE CENTER

# HOME SECURITY PROTOTYPE FOR INTRUDER DETECTION

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## PROBLEM STATEMENT

The increasing frequency of residential break-ins poses a critical security challenge for homeowners. Traditional security measures may prove inadequate in deterring modern burglary tactics. With the growing sophistication of criminals, there is a pressing need to develop and implement advanced, cost-effective home security solutions that provide comprehensive protection, ensuring the safety and peace of mind for residents.

## TEAM MEMBERS



**Deviprasad AV**  
**Gagan A Rai**  
**Ujwal Shetty**

**Prajwal Raikar**  
**Deekshitha**

## SOLUTION

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Our innovative home security solution tackles the challenge by implementing a comprehensive prototype. We combine a Passive Infrared (PIR) sensor, Raspberry Pi, Raspberry Pi Camera, and a buzzer. The PIR sensor detects intruder motion, prompting the Raspberry Pi to activate the camera. Images are analyzed with OpenCV for facial recognition, triggering the buzzer upon positive identification. This real-time security system, with potential remote notifications, assures homeowners of reliability. Rigorous testing, fine-tuning, and adherence to ethical and legal standards guarantee a secure and privacy-respecting solution.



## MANGALORE CENTER

# PATIENT ASSIST BOT

### PROBLEM STATEMENT

Developing robots for patient care in healthcare is a multifaceted challenge. Customization for diverse environments, prioritizing safety and reliability, navigating complex regulatory landscapes, ensuring data security, and fostering empathetic human-robot interaction are key concerns. Ethical considerations, cost-effectiveness, scalability, interoperability, and public acceptance further complicate the task. Collaborative efforts from engineers, healthcare professionals, regulators, and ethicists are essential in the ongoing process of developing innovative, safe, and ethical solutions for patient care in response to the evolving needs of healthcare delivery.

### TEAM MEMBERS

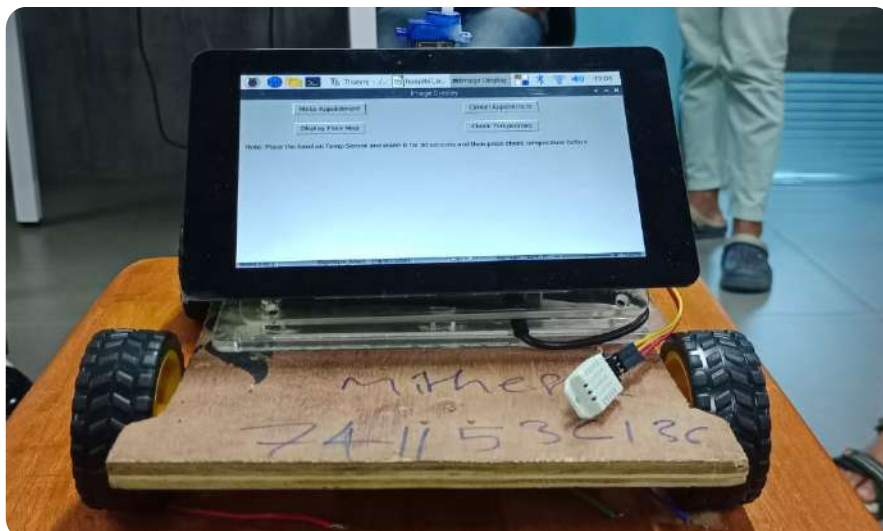


**Ihthihsham  
Prajwal D k  
Teja.L**

**Abhaya Y  
Mithesh**

### SOLUTION

In addressing the multifaceted challenges of healthcare robotics for patient care, innovative solutions must prioritize customization for diverse environments and patient needs. Emphasizing safety and reliability is crucial to prevent potential severe consequences of malfunctions. Overcoming regulatory hurdles requires a nuanced understanding of healthcare standards. Safeguarding data security and patient privacy is paramount, considering the sensitive information handled by healthcare robots. The solution lies in developing robots that engage empathetically and effectively with patients, ensuring a harmonious human-robot interaction in the complex healthcare landscape.



## MANGALORE CENTER

# SEWER CLEANING AND INSPECTION BOT

## PROBLEM STATEMENT

The persistent prevalence of manual scavenging in sewers is a pressing concern, representing a grave violation of human rights and endangering the lives of marginalized and impoverished workers. Despite legal prohibitions, individuals continue to face life-threatening conditions while manually cleaning sewage systems. This deeply ingrained issue underscores a systemic failure in addressing underlying problems. An immediate and comprehensive intervention is imperative to eradicate manual scavenging, replacing it with advanced and safer technological alternatives, thereby safeguarding the dignity and well-being of workers and upholding their fundamental rights.

## TEAM MEMBERS

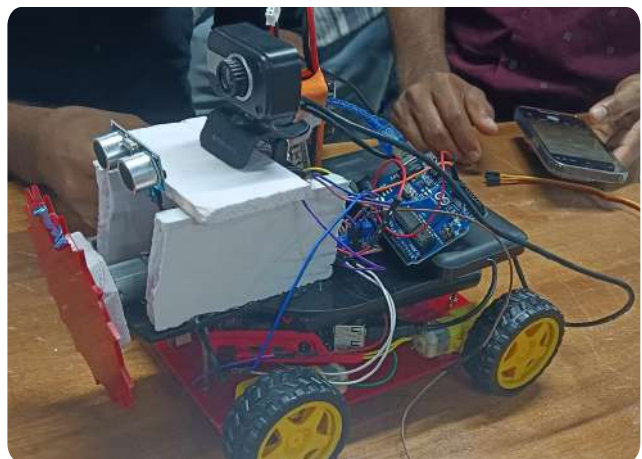
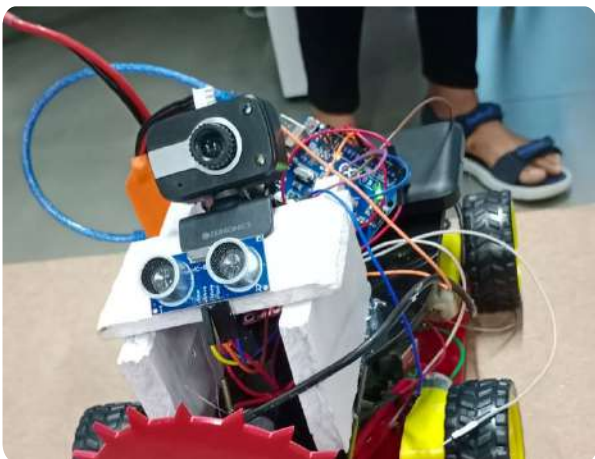


**Suhan  
Sawan  
chiranthana**

**Shreejal  
Srujal**

## SOLUTION

In response to the aforementioned problem statement, students have devised a solution: a prototype scavenging robot equipped with a camera and ultrasonic sensor for efficient detection. This innovative technology aims to eliminate the need for manual labor in hazardous sewer environments. Controlled by an Arduino controller, the robot offers a safer and more advanced alternative, ensuring the well-being of workers while addressing the systemic issues surrounding manual scavenging.



## MANGALORE CENTER

# MULTI FUNCTIONAL BOREWELL RESCUE ROBOT

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## PROBLEM STATEMENT

The rescue of children trapped in borewells poses numerous challenges. The narrow, deep shafts make access difficult for rescue teams, hindering swift operations. Technical complexities arise due to limited space, necessitating specialized equipment. Delicate operations risk harm to the child, demanding precision. Time constraints add urgency, amplifying the pressure on rescuers. Coordination among various agencies is crucial, yet often challenging

## TEAM MEMBERS

**Suhan**  
**Sawan**  
**chiranthana**

**Shreejal**  
**Srujal**

## SOLUTION

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Introducing the 'Borewell Rescue Robot,' solution to the formidable challenge of navigating intricate borewell terrain. This prototype of the robotic system maneuvers through complex and hazardous environments, precisely locating and retrieving individuals in distress. By enhancing the safety and efficiency of borewell rescue operations, the project stands as a crucial response to urgent concerns, aiming to save lives in critical emergencies through cutting-edge technology and strategic intervention.



## MANGALORE CENTER

# UV DISINFECTION ROBOT

### PROBLEM STATEMENT

The pressing concern lies in the perilous disinfection protocols within healthcare facilities, exposing frontline workers to heightened infection risks amid contagious diseases like COVID-19 and Nipah virus. Hospital staff, including nurses and doctors, assume the task of disinfecting wards, elevating their vulnerability during patient care. This dilemma highlights the formidable challenge of ensuring thorough disinfection amidst rapidly spreading diseases, jeopardizing the safety of healthcare personnel.

### TEAM MEMBERS



**Dhanya Kumari S**  
**Rucheeta Metri**

**Preethi P**  
**Prithviraj n nambiar**

### SOLUTION

The Automated Sorting System, which employs Raspberry Pi, OpenCV, DC motors, and servo motors, presents an effective answer for sorting objects based on color in industrial applications. This automated system caters to the requirements of a range of industries, including manufacturing, logistics, and recycling. By utilizing Raspberry Pi as the central controller and leveraging OpenCV for accurate color recognition, the system optimizes sorting procedures.



# ACCOLADES & ACHIEVEMENTS

**46**  
STUDENTS  
PARTICIPATED

**7**  
EVENTS  
PARTICIPATED

**5**  
EVENTS  
WON





## MANGLORE CENTER

# Anvesana Innovation and Entrepreneurial Participation

## ABOUT THE EVENT

"Automatic Wet Preventing Mechanization," secured both attention and a spot for funding and mentoring, ranking among the top 8 teams. This achievement marks a significant entrepreneurial milestone, underscoring the acknowledgment of their outstanding work.

**TEAM MEMBERS**     **Ujwal U Naik | Sai Prasad Nayak M | Tejas Kumar | Syed Saleha**



## SIGFEST'23 Third Place

## ABOUT THE EVENT

At SIGFEST'23, hosted by Manipal University-Jaipur, excelled in the ROBO SOCCER competition, clinching the 3rd place. Their remarkable performance showcased not just technical expertise but also strategic brilliance, earning them well-deserved recognition in this fiercely competitive arena.

**TEAM MEMBERS**     **Syed Hyder Mahdi | Abhal Nihal | Mohibin Numan**



## MANGLORE CENTER

# Epichon First Place

### ABOUT THE EVENT

Epichon, in collaboration with INEX India and Be Practical Tech Solution witnessed B.I.T Mangalore students deliver a stellar performance. The talented team actively engaged in ROBO SOCCER, securing the coveted 1st prize.

**TEAM MEMBERS**     **Syed Hyder Mahdi | Nararyan Nayak | Harshit Kumar**



# Caterpillar Autonomy Challenge Third Place

### ABOUT THE EVENT

IIT Madras hosted the Caterpillar Autonomy Challenge where B.I.T Mangalore's Team Automation Alliances claimed victory, securing the third position and a cash prize of Rs 40,000. Having completed the Innoventure Robotic Internship from ComedKares, the team effectively applied the concepts learnt, mastering the utilization of Raspberry Pi. Furthermore, the team seized the opportunity to engage with industry experts from Caterpillar Company, enhancing their practical knowledge.



### TEAM MEMBERS

**Aadil Nazeera Gundagi**  
**Syed Nabeel Hussain**  
**Mohammed Fayeem**  
**M H MUHAMMAD RIZWAN**  
**Mohammed Thahseen**  
**Mahammad Arshak P**

## MANGLORE CENTER

# Technoxian, World Robotics Championship Participation

## ABOUT THE EVENT

The TECHNOXIAN, World Robotics Championship Series 7th edition held in Noida, a prestigious event that brought together robotics enthusiasts and experts from around the world. The team showcased their skills, innovation, and dedication to robotics.

## ROBO SOCCER

Team Shastra from Canara College of Engineering demonstrated exemplary skills at the prestigious Technoxian World Robotic Championship on July 25, 2023, particularly shining in the ROBO SOCCER event.

## TEAM MEMBERS

**MEHUL KINI | ANOOP S PRABHU | RAHUL BHAT |  
SARTHAK PAI | PRATHAM | PRANAM | VAIDURA**



## ROBO RACE

tudents from Sahyadri College of Engineering and Management in the thrilling ROBO RELAY event. Their innovative prowess and technical acumen were on full display as they competed fiercely in this cutting-edge robotic competition.

## TEAM MEMBERS

**Ananth | Vasanth**













# Thank You

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