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INNOVATION HUB

YELAHANKA CENTER

BENGALURU

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HYPOTHERMIA MONITOR FOR NEW BORN BABIES

PROBLEM STATEMENT

Neonatal hypothermia presents a life-threatening hazard to newborns, especially preterm and term infants, in the absence of sustained warmth. A substantial challenge for healthcare providers and parents lies in the lack of consistent and precise temperature monitoring beyond the delivery room. The absence of robust monitoring protocols heightens the vulnerability of newborns, underscoring the urgent requirement for ongoing temperature surveillance. This continuous monitoring is essential to mitigate the risk of hypothermia during the critical early hours post-birth, ensuring the well-being of neonates.

TEAM MEMBERS

Spoorthi, CSE

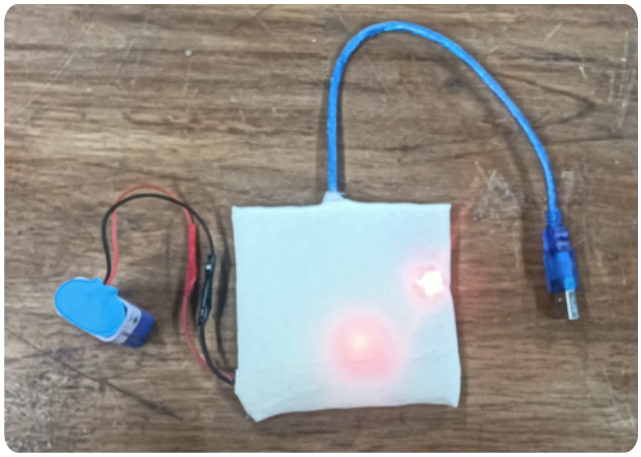
S.S.Snehashree, CSE

Nisha, CSE

Divyashree, CSE

SOLUTION

Presenting an innovative temperature-monitoring solution, a groundbreaking sticker embedded with cutting-edge technology is introduced. This high-tech sticker features a nano temperature sensor that accurately detects body temperature changes, relaying real-time data to a microcontroller. Serving as the brain of the system, the microcontroller orchestrates a RGB LED light, dynamically displaying colors to signify varying levels of hypothermia. Designed for families, this compact and user-friendly technology provides a proactive tool for monitoring loved ones' well-being, leveraging advanced sensor and LED technology to enhance health awareness and enable timely responses to temperature fluctuations.



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SMART TROLLY

PROBLEM STATEMENT

Cumbersome and storage-hungry traditional trolleys often transform grocery trips into frustrating experiences. Customers navigate crowded aisles, juggling overflowing baskets and grappling with limited capacity. This outdated system fails to meet evolving shopping needs, hindering convenience and diminishing overall satisfaction.

TEAM MEMBERS

Likith, CSE

Chinmayshree B N, CSE

Asil Omar, CSE

Hrithika P, CSE

Shikha singh, CSE

SOLUTION

Introducing an advanced Smart Trolley Design, this solution enhances the shopping experience. Featuring a sliding mechanism for size adjustment, it optimizes storage capacity and minimizes space when not fully utilized. Complemented by an integrated Barcode Scanner, it revolutionizes checkout by allowing customers to scan items while shopping, reducing wait times. This intelligent fusion of a sliding mechanism and barcode scanner redefines traditional shopping trolleys, offering a sophisticated solution that maximizes convenience and elevates the overall shopping experience for consumers.

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SMART PARKING SYSTEM

PROBLEM STATEMENT

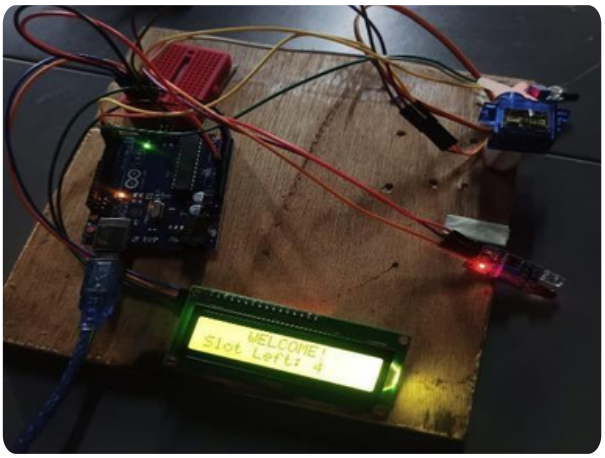
The problem at hand involves the pervasive issue of parking congestion, characterized by overcrowded parking areas that hinder the seamless identification of available spaces. Additionally, inefficient space utilization in poorly designed or managed lots exacerbates the problem, leading to the wastage of parking spots. This situation not only causes frustration for drivers but also contributes to traffic delays and environmental concerns. Addressing this problem requires effective parking solutions and optimized space management to alleviate congestion and enhance overall urban mobility.

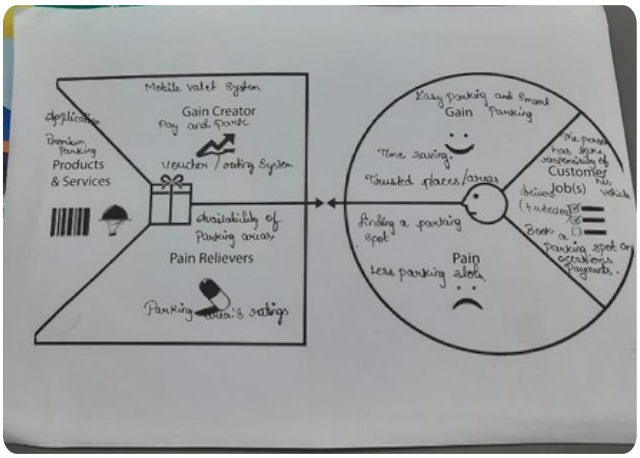
TEAM MEMBERS

Daivik
Abhishek Kumar
Rithika Ramamurthy
Venkat Shirisha
Samprita Santosh Naik

SOLUTION

A smart parking app powered by a network of sensors in parking lots. This app would offer real-time information on available parking spaces, not just by location, but by type (regular, accessible, motorcycle). Through AI-powered route optimization, it would guide drivers directly to available spots, minimizing search time and congestion. Additionally, the app could integrate with campus ID cards for automated payment and access control, streamlining the parking experience. This data-driven approach could also inform parking facility planning and management, identifying underutilized areas and optimizing space allocation through dynamic signage or designated zones.





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RAIN WATER HARVESTING SYSTEM

PROBLEM STATEMENT

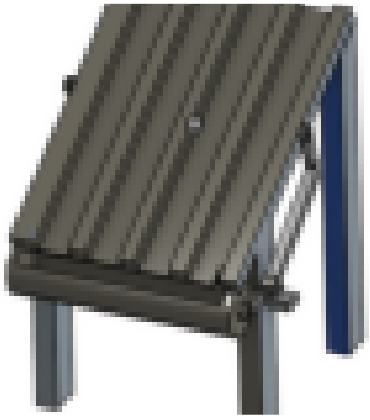
The increasing strain on public water supply systems and escalating water scarcity necessitate an exploration of effective and sustainable solutions. This study aims to investigate the potential of rainwater conservation and reuse as a viable strategy. The research will assess the impact of harnessing rainfall on water resource management, sustainability, and its ability to alleviate pressure on traditional water sources. Understanding the feasibility and benefits of rainwater harvesting is critical for addressing the pressing challenges associated with water scarcity and resource depletion.

TEAM MEMBERS

Chithrashree A
Chandana A
Sharanya KT
Nanya ST
Rakshitha Omkar LM

SOLUTION

A manual gutter solution, which presents a cost-effective and accessible alternative. Focused on basic water diversion, it efficiently collects and redirects rainwater, safeguarding building foundations. Its economic installation appeals to a wide user base, offering affordability compared to automated counterparts. Moreover, its adaptability in materials, sizes, and configurations provides versatility, catering to diverse architectural styles and environmental demands. In the third person perspective, one recognizes manual rainwater gutter solutions as a practical choice for effective and customization rainwater management.



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ONLINE BOOK EXCHANGE PLATFORM

PROBLEM STATEMENT

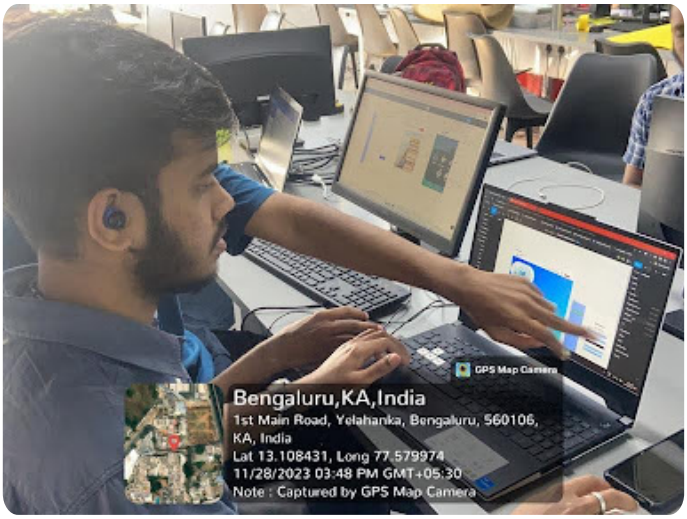
Access to affordable and high-quality study materials and books poses a significant challenge for students preparing for competitive exams. The prohibitive cost of resources restricts access, particularly for economically disadvantaged individuals. Furthermore, the scarcity of comprehensive and reliable content hampers effective exam preparation. This issue undermines the equitable distribution of educational opportunities, hindering students' chances of success. Addressing these challenges is imperative for fostering a fair and accessible educational landscape.

TEAM MEMBERS

Faiza Anjum
Adithya
Mohammed Bilal
Mohammed Ali
Likith

SOLUTION

The Online Book Exchange Platform revolutionizes book access, offering a centralized hub for diverse national collections. Its user-friendly website facilitates seamless exploration, fostering community engagement through genre-specific forums. The platform's unique Book Exchange System promotes affordability and sustainability, enabling users to trade books at reasonable prices. By integrating centralized access, community interaction, and a book exchange system, this platform transforms into a vibrant space, uniting literary enthusiasts, promoting affordability, and contributing to a sustainable reading culture.



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DRY WASTE SEPARATOR

PROBLEM STATEMENT

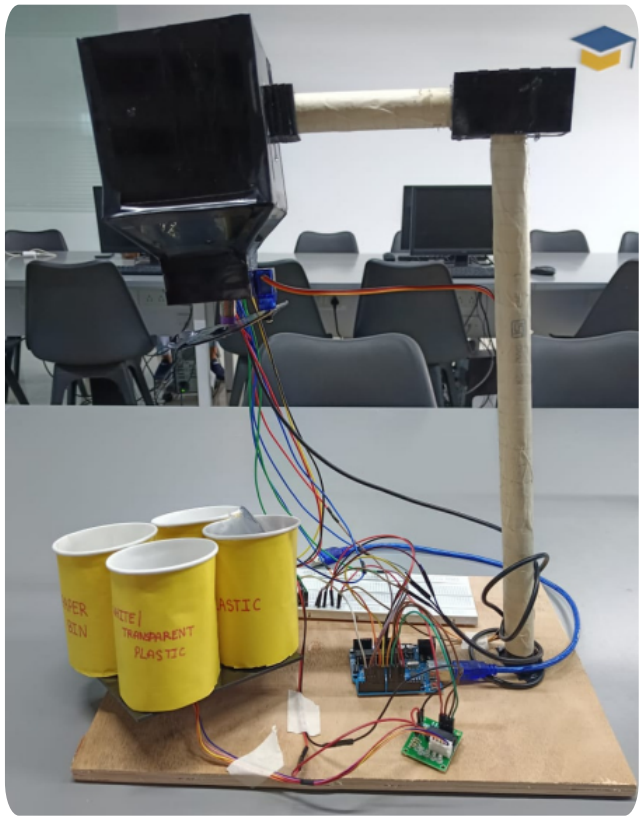
Inadequate waste segregation at collection centers triggers a cascade of adverse outcomes, hindering the optimal recycling of valuable resources and exacerbating environmental pollution. The improper sorting of waste disrupts the recycling process, leading to the loss of recyclable materials and escalating the burden on landfills. This failure in waste management perpetuates a cycle of environmental degradation, posing a significant threat to sustainability and necessitating urgent corrective measures for effective waste segregation at the source.

TEAM MEMBERS

Chandana S
Sangeetha H V
Subhashree

SOLUTION

Incorporating Conveyor Belt Integration, the system aims to streamline material flow, improving waste sorting efficiency. An inductive proximity sensor for metals, employing inductive proximity sensing, identifies and segregates metallic waste. Concurrently, the TCS3200 colour Sensor for paper and plastic distinguishes paper and plastic waste based on color properties. These integrated technologies optimize waste management, promoting organized sorting and targeted material removal. The resulting efficient system contributes to environmentally conscious practices, ensuring the recycling process is both streamlined and resource-effective.



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FARM MACHINE LENDER APP

PROBLEM STATEMENT

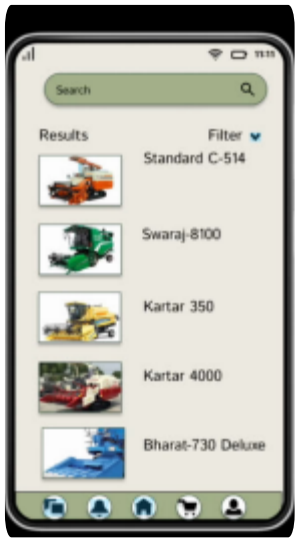
Current farm equipment lending systems are clunky and limiting. Small-scale farmers face high upfront costs, complex paperwork, and restrictive access, hindering their productivity and profitability. Traditional lenders often prioritize large farms, leaving smaller operations stuck with outdated or inadequate machinery. This equipment inequity stifles innovation, restricts crop diversification, and ultimately weakens the resilience of our food system. We need a nimble, accessible, and inclusive solution that connects farmers with the equipment they need, when they need it, empowering them to thrive and cultivate a more sustainable future.

TEAM MEMBERS

POOJA C
VAISHNAVI M S
NAVYA R
SAMEEKSHA S SHANKAR

SOLUTION

This innovative platform aggregates all the available machinery in your local area, from tractors and harvesters to specialized tools, and puts them just a tap away. Gone are the days of endless phone calls and inconvenient travel. Farmers browse detailed listings, compare prices and features, and securely book equipment with instant confirmations. The app facilitates transparent communication with owners, streamlining rentals and fostering trust. No more idle machinery gathering dust - equipment finds new purpose, generating income for owners and empowering farmers to optimize their operations. This data-driven platform also analyzes usage patterns, guiding future investments in the community's equipment needs.



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COCONUT RACHIS FIBER BLEND

PROBLEM STATEMENT

Coconut farmers grapple with the challenge of efficiently handling coconut rachis waste, causing environmental and economic issues. The absence of sustainable disposal practices leads to pollution, hinders agriculture, and restricts farmer incomes. Solving this demands innovative methods to convert coconut rachis waste into valuable resources, ensuring environmental sustainability and economic gains. Developing practical and scalable approaches is crucial for helping farmers manage and repurpose this waste, turning it into a valuable asset for enhanced agricultural and environmental sustainability.

TEAM MEMBERS

Rakshitha. R
Anushree
Bhuvan Krishna. K
Ajay.A

SOLUTION

Introducing our groundbreaking "Coconut Rachis Fiber Blend" solution, we present an innovative strategy to tackle the issue of coconut rachis waste while promoting sustainable agriculture. This cutting-edge approach involves mechanically crushing coconut rachis into manageable fiber particles, blending them with organic fertilizers. The resulting blend serves as a nutrient-rich, eco-friendly growth medium for smaller plants, ideal for urban and rooftop farming. By transforming waste into a valuable resource, this solution addresses environmental concerns, encourages sustainable farming, and empowers farmers with a cost-effective and space-efficient tool for enhancing soil fertility and plant health.

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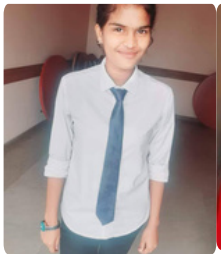
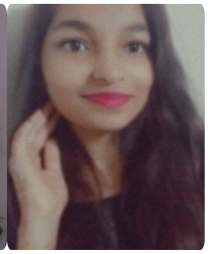
PREVENTION OF WHITE FLY INFECTION ON COCONUT TREES

PROBLEM STATEMENT

Farmers cultivating tall trees, such as coconut trees, face a pressing challenge in countering white fly infections, impacting crop health and yield. Current pest management falls short in addressing tall tree ecosystems' unique challenges, leading to decreased productivity, economic losses, and environmental concerns. Innovative strategies are crucial to specifically target and mitigate white fly risks on towering crops like coconut trees. How might we develop practical methods for farmers to prevent white fly infections on tall trees, ensuring sustainable agricultural practices and preserving crop yield?

TEAM MEMBERS

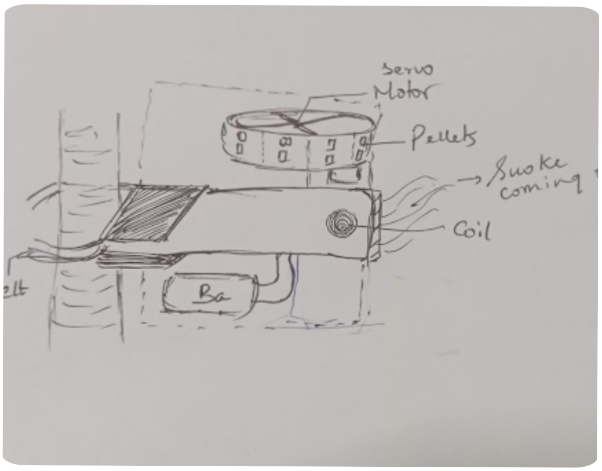


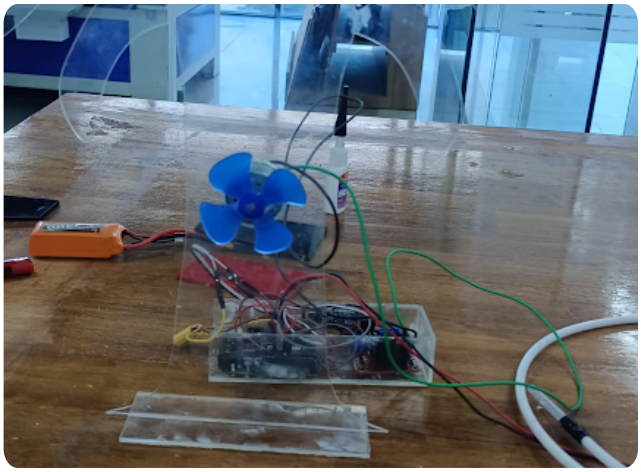


N Roopashree
N A Mehak
Radhika M

SOLUTION

This device, attached directly to the trunk, emits a gentle plume of smoke, creating an invisible shield against pesky white flies. Powered by a small solar panel and battery, the system ensures continuous smoke production without harming the trees. The device houses a chamber containing natural, biodegradable materials like dried neem leaves or coconut shells. An internal heating element gently smolders these materials, generating a thin, non-toxic smoke. White flies find the smoke's scent and particles irritating, preventing them from landing on the leaves and damaging the crops.





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SMART CHESS BOARD

PROBLEM STATEMENT

For the visually impaired, the stress-relieving world of games often holds hidden hurdles. While some classics like chess and Monopoly exist in tactile formats, mastering them requires a constant human guide. Crucial information like dice rolls, opponent moves, or board layouts remain inaccessible, hindering independent play. Existing tactile interfaces lack the detail and dynamism to fully convey game context, leading to confusion and frustration.

TEAM MEMBERS

Lekhan P Simha

Karthik D

Amulya.MG

Pavan Kumar

SOLUTION

Our chess board is an advanced version of the basic braile chess board. We have pushbuttons underneath every block and it is linked to an Arduino. When the visually impaired player keeps the pawn they will get to know the location and placement of the pawn in an audio format.

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SMART CANE

PROBLEM STATEMENT

To create a cost-effective and reliable smart cane that proactively detects and accurately communicates potential hazards, enhancing safety and confidence in every step. This demands overcoming the technical and financial hurdles that plague existing solutions. How might we develop a smart cane that not only detects obstacles but also offers immediate and accurate feedback, ensuring enhanced independence and safety for visually impaired individuals?

TEAM MEMBERS

CHANDAN.S
HITESH.S
POOJA.N
MANU.R

SOLUTION

Our innovative smart cane empowers visually impaired individuals to navigate confidently without the constant need for their phones. Equipped with an inbuilt vibrating system, the cane incorporates two ultrasonic sensors—one at the bottom for ground-level obstacles and another in the middle for distant objects. The handle features a sensor that vibrates upon detecting obstacles, complemented by two buzzers for audible alerts. This comprehensive design enhances user awareness and facilitates independent and secure mobility.

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BRAILLE TAB

PROBLEM STATEMENT

For individuals with dual sensory impairments, both sight and hearing limitations, accessing written information remains a monumental challenge. Screen readers, while helpful for the visually impaired, fall short for those unable to hear. Traditional Braille resources are limited and cumbersome, restricting educational opportunities and intellectual growth. This dual sensory barrier leaves many trapped in a silent, information-deprived world.

TEAM MEMBERS

Anubhav S

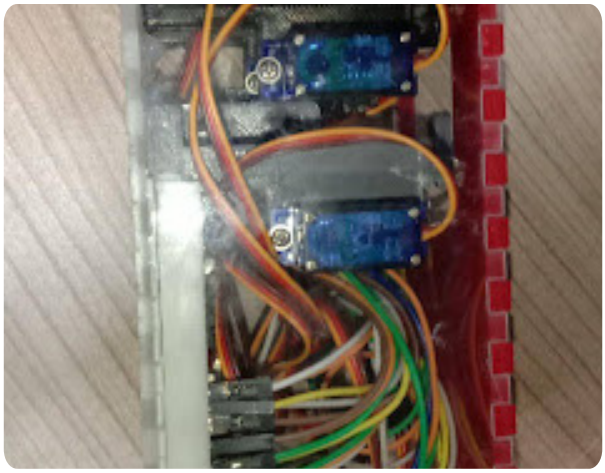
Sangeetha A

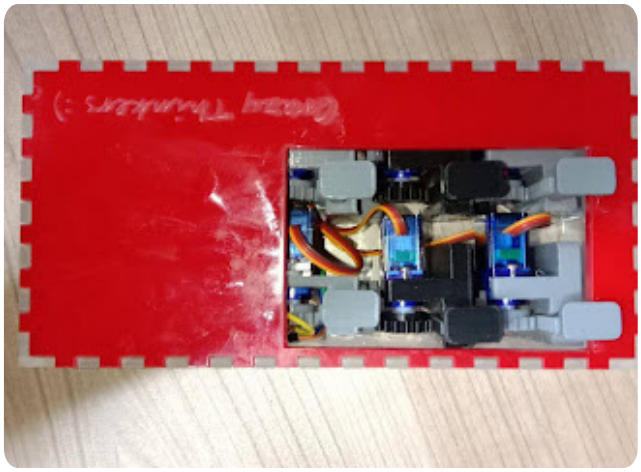
Jayanth N B

Tharun R

SOLUTION

Our team developed a Braille converter featuring 3D-printed servo motors and actuators. The current prototype utilizes Arduino as the processing unit to seamlessly convert English alphabets into Braille code. This code serves as the input for the actuators, precisely controlling the elevation of dots in response to each alphabet. This innovative system combines technology and tactile feedback, providing an effective means to convert and comprehend written information for individuals with visual impairments.





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TEXT TO SPEECH CONVERTER

PROBLEM STATEMENT

Visually and speech-impaired individuals face a double barrier in communication. Traditional methods rely on third-person translators, creating delays, distortions, and a loss of immediacy. This disrupts the essence of conversation, leaving both parties yearning for a more direct and nuanced exchange. To build a bridge across these communication gaps. We envision a seamless technology that empowers direct interaction, eliminating the need for intermediaries.

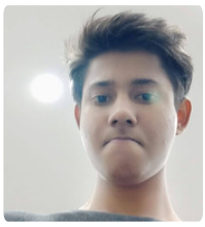
TEAM MEMBERS

VARUN MV

YUVARAJ.A

MEGHANA.S

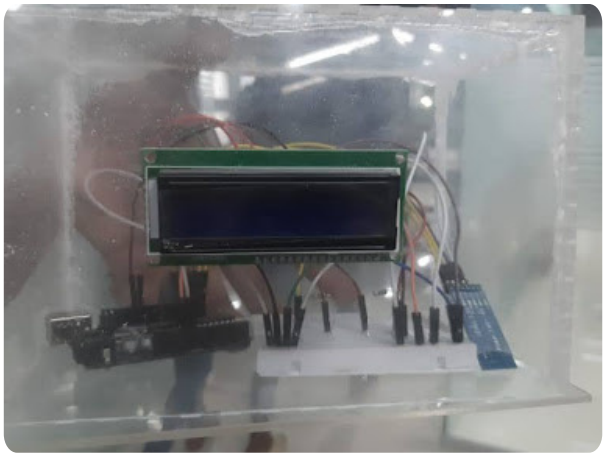
Tharun.G

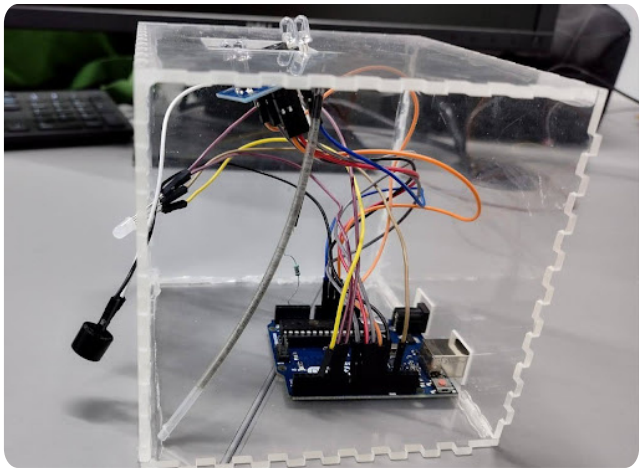


Rahul Jha

SOLUTION

Our prototype integrates voice recognition for converting spoken words into text, displayed on an LCD screen, facilitating communication for the hearing impaired. Additionally, it features a Text-to-Speech module that transforms typed text into audible speech, enabling the visually impaired to hear messages. This inclusive design ensures a two-way communication channel, allowing both hearing and visually impaired individuals to engage effectively without barriers. As we refine this prototype, our goal is to create a user-friendly solution that enhances communication accessibility and promotes seamless interaction between diverse abilities.

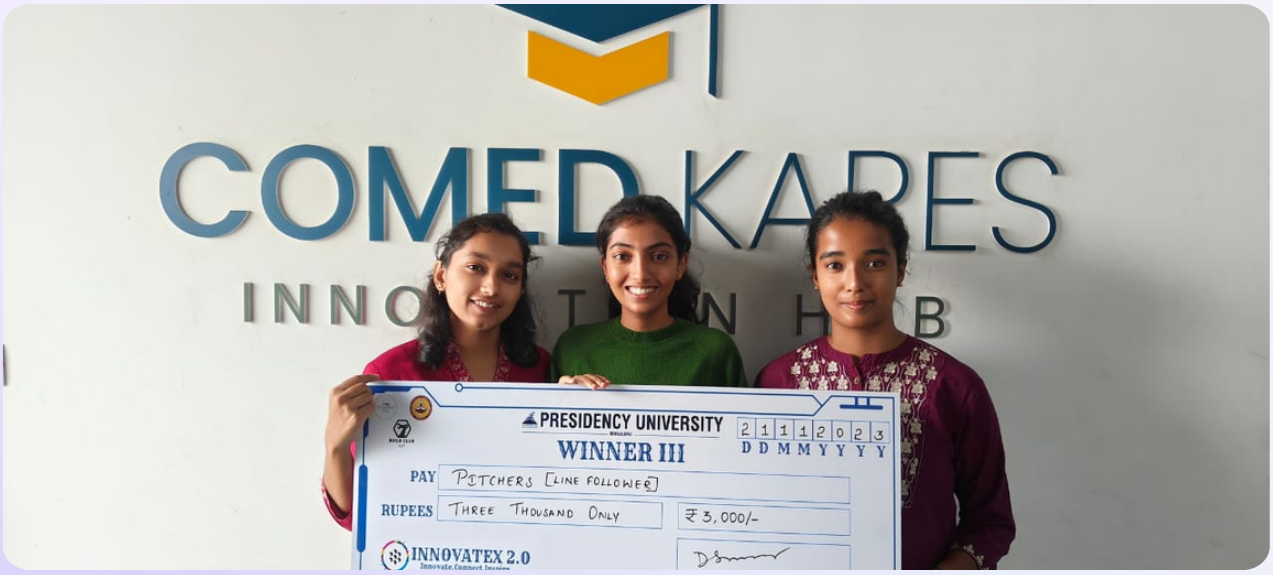




ACCOLADES &

ACHIEVEMENTS

112	18	5
STUDENTS PARTICIPATED	EVENTS PARTICIPATED	EVENTS WON



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ANUSF - 2023
First Place

ABOUT THE EVENT

ANUSF - 2023 Hackathon, hosted by Anurag University and IUCEE in Hyderabad. This team secured the 1st place in the Sustainability Inquiry and Investigation category focused on the UN' SDG 6. This achievement underscores their dedication and expertise in addressing global challenges related to sustainable development.

TEAM MEMBERS **Nawab Mehak**

BMSIT Hackathon
First Place

ABOUT THE EVENT

The team secured 1st place at the Open Day, an idea pitching event hosted by BMSIT college. Their success at the idea pitching event highlights the project's viability and their capability to articulate and showcase its merits in a competitive environment.

TEAM MEMBERS **Madhura | Dheeraj**

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Pick and Place
Second Place

ABOUT THE EVENT

Team JUGAAD, representing MSRUAS, participated in Pick and Place Competition in Roboveda, Hyderabad. They clinched the Runner's prize and also received a prize worth INR 4000. Hats off to the incredible Team JUGAAD whose dedication and skills brought them this well-deserved victory.

TEAM MEMBERS **Shaajiya | Aryan | Aditya | Akshat | Shreyaas**

Line Following BOT
Third Place

ABOUT THE EVENT

Team PITCHERS, representing MSRUAS, made a remarkable mark at the Line Following BOT competition during the Presidency University Technical Fest. They clinched the 3rd prize by completing the challenging long arena.

TEAM MEMBERS **Arpitha Hegde | Rashmi S | Drushi Kruthik**