AMRUTA INSTITUTE OF ENGINEERING AND MANAGEMENT SCIENCES

IIC 6.0 in association with Department of

INFORMATION SCIENCE AND ENGINEERING

SMART INDIA HACKATHON-2K24

PRESENTS

TECHNO-QUEST-2.O – Internal Hackathon

IIC Convener

Dr. Prathibhadevi Tapashetty

SPOC

Dr. B. I. D. Kumar

FACAULTY COORDINATOR

Mrs. Ashwini K

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Mr. Simon Leo Alexander

Mr. Shivarama R

<u>INAUGRATION</u>

Smart India Hackathon was Inaugurated on 17th September 2024 at 10AM in the morning with a pleasant Ganapathy Vandhana and talk from chief guests of this events Dr. Santosh M Muranal (Principal Of Amruta Institute of Engineering and Management Sciences) , Dr. Rajeshwar Kadadevaramath (Dean of Amruta Institute of Engineering and Management Sciences) , Dr. Prathibhadevi Tapashetty (Professor and IIC Convener) , Dr. B. I. D. Kumar(HOD of Information Science and Engineering).

<u>PANEL OF JURY MEMBERS</u>

We had three Jury Members who judged the participating teams with high precision and endurability. The Jury members were

1. **<u>Dr. Sridhara S. B</u>**. (Head of Department of Computer Science and Engineering).
2. **<u>Dr. Veeresh Patil</u>** (Head of Department of Electronics and Communication Engineering).
3. **<u>Dr. Prathibhadevi Tapashetty</u>** (Professor ECE department).

The teams who participated were :

1) Team NEXGEN
2) Team Tech Crew
3) Team Beta
4) Team The Nights
5) Team Goal Hunters
6) Team Evergreen Champions
7) Team The Warriors.

1)   NEXGEN

Theme:
Agriculture, food and rural development.

Problem Statement:
Preventing Food Wastage.

Team Members :
- Srujana Deshpande (ISE, 2nd Year)
- Simon Leo Alexander (ISE, 2nd Year)
- Shivarama R (ISE, 2nd Year)
- Yogeshwari R (ISE, 2nd Year)
- Nirvan M (ISE, 2nd Year)
- Bhaskar (ISE, 2nd Year)

Innovation:
A web based application where the food to be donated will be uploaded online so that some organisations who are in need of it can approach and use it for a better cause rather than wasting it. This web based application is a platform where NGO's or animal organisations can use wasted food for a better cause rather than just throwing it.

Summary:
Addressing food waste is crucial for creating a sustainable food system. By improving awareness, enhancing supply chain practices, and fostering collaboration among stakeholders, we can significantly reduce food waste and its associated impacts. Collective action from individuals, businesses, and governments is essential to build a more efficient and equitable food system. This report provides a concise overview of food waste management, highlighting its significance and offering actionable strategies for improvement. Adjustments can be made based on specific requirements or focus areas.

For a detailed document about this particular innovation please visit :

https://onedrive.live.com/view.aspx?resid=71CDDDCB5EAE2DCA!2844&cid=71cdddcb5eae2dca&authkey=!AJR2BBW1cL2SsqA&CT=1726745255401&OR=ItemsView

2)   TECH CREW

Theme:
Agriculture , Food and Rural Development.

Problem Statement:
Agriculture Fire Detection.

Team Members:
1. Aishwarya SS (CSE, 2nd Year)
2. Aaiman Fhalak (CSE, 2nd Year)
3. Abdul Jameel Ahmed (CSE, 2nd Year)
4. Farzana Tasneem (CSE, 2nd Year)
5. Manasa M (CSE, 2nd Year)
6. Goutham (CSE, 2nd Year)

Innovation
Integrated detection, suppression, alerts & resource-efficient.

Summary:
Fire sensors in fields detect fires early, triggering sprinklers, buzzer, and notifying the farmer. Quick Detection: Stops fire before they spread. Automated Response: Immediate fire control and alerts. Real-Time Alerts: Farmers get instant notifications.

View More Details About this project at :

https://onedrive.live.com/view.aspx?resid=71CDDDCB5EAE2DCA!2860&cid=71cdddcb5eae2dca&authkey=!AJR2BBW1cL2SsqA&CT=1726745696534&OR=ItemsView

3)   GOAL HUNTERS

Theme:

Toys and Games

Problem Statement:

Children creating their own interactive stories, games and animations.

Team Members:

- Manju k (ECE, 2nd Year)
- Prajwal U (ECE, 2nd Year)
- Pradeep (ECE, 2nd Year)
- Sinchana (ECE, 2nd Year)
- Harshitha (ECE, 2nd Year)
- Rohini G (ECE, 2nd Year)

Innovation :

Used a visual programming language called as **Scratch** which is specially used for children and beginners to learn coding concepts in an engaging way .

Summary:

Scratch is a visual programming language designed primarily for children and beginners to learn coding concepts in an engaging way. Developed by MIT Media Lab, it uses a block-based interface that allows users to drag and drop code blocks to create animations, games, and interactive stories.

For more information please visit :

https://onedrive.live.com/view.aspx?resid=71CDDDCB5EAE2DCA!2861&cid=71cdddcb5ea e2dca&authkey=!AJR2BBW1cL2SsqA&CT=1726762274997&OR=ItemsView

4)   BETA

Theme:

Smart Vehicles

Problem Statement:

Smart devices that can be used in vehicles.

Team members:

- Poorvik Hebbal Y (CSE, 2nd Year)

- Raghuveer S (CSE, 2nd Year)

- Prajwal Yadav S (CSE, 2nd Year)

- Prajwal Hiremath (CSE, 2nd Year)

- Shivaputra S Desai (CSE, 2nd Year)

- Sanjana B G (CSE, 2nd Year)

Innovation:

Our proposed innovation aims to design and develop a line follower robot using Arduino, capable of tracking and following a predefined line with precision.

Summary:

Our innovative project aims to design and develop a line follower robot using Arduino, equipped with advanced algorithms and sensor fusion for precise navigation along predefined paths. The robot will feature infrared sensors for line detection and tracking, enabling it to efficiently navigate intricate routes. Key functionalities include real-time speed adjustment, direction control, and an obstacle detection and avoidance system.

For more information please visit :

https://onedrive.live.com/edit.aspx?resid=71CDDDCB5EAE2DCA!2858&cid=71cdddcb5eae2dca&authkey=!AIXt6WenHP24eug&CT=1726800461270&OR=ItemsView

5)   THE KNIGHTS

Theme:

Blockchain & Cybersecurity

Problem Statement:

Public WIFI security risks

Team members:

- Sathwik Ural (ECE, 2nd Year)
- Amar (ECE, 2nd Year)
- Prakruthi K (ECE, 2nd Year)
- Sudarshan Kumar I K (ECE, 2nd Year)
- Sagar N Murthy (ECE, 2nd Year)
- Mahanth Rishi G M (ECE, 2nd Year)

Innovation:

Protexa is an automated Wi-Fi security solution that uses Nmap for vulnerability assessment and implements immediate security measures like firewall adjustments. It offers a user-friendly interface for customization and generates detailed reports on network security. Future enhancements will include real-time monitoring and integration with additional security tools.

Summary:

Protexa successfully identified multiple vulnerabilities within the local Wi-Fi network and applied essential security measures to mitigate these risks. The use of Nmap for network scanning provided detailed insights into the security posture of the network, while the automated security steps improved the overall security configuration. Protexa serves as a valuable tool for network administrators and users looking to secure their Wi-Fi networks against common threats.

For more information please visit :

https://onedrive.live.com/edit.aspx?resid=71CDDDCB5EAE2DCA!2851&cid=71cdddcb5eae2dca&authkey=!AIXt6WenHP24eug&CT=1726800723497&OR=ItemsView

6) EVERGREEN CHAMPIONS

Theme:
Clean and Green Technology

Problem Statememt:
Lack of segregation

Team members:
- Shivani (ECE, 2nd Year)
- Bhumika M S (ECE, 2nd Year)
- Poorvika (ECE, 2nd Year)
- Manjula (ECE, 2nd Year)
- Bhagyashri (ECE, 2nd Year)
- Vinutha U (ECE, 2nd Year)

Innovation:
Integrate IoT and machine learning for real-time air quality monitoring and predictive analytics, while developing a mobile app for community engagement and data sharing. Enhance the system with multi-sensor capabilities and AR visualizations to improve public awareness. Collaborate with educational institutions to foster environmental stewardship among students.

Summury:
By implementing these innovative strategies, the air quality monitoring and forest surveillance systems can become more effective, user-friendly, and sustainable. Enhancing community engagement and leveraging advanced technologies will not only improve environmental monitoring but also contribute to greater public awareness and action towards preserving our ecosystems.

For more information please visit :

https://onedrive.live.com/edit.aspx?resid=71CDDDCB5EAE2DCA!2852&cid=71cdddcb5eae2dca&authkey=!AIXt6WenHP24eug&CT=1726800972094&OR=ItemsView

7)   **THE WARRIORS**

Theme:

Smart Vehicles

Problem Statement:

Alcohol detection in vehicles.

Team members:

- Likhitha K C (CSE, 2nd Year)
- Keerthana N (CSE, 2nd Year)
- Likhitha Nagesh (CSE, 2nd Year)
- Rayankula Maneesha (CSE, 2nd Year)
- Mithun P (CSE, 2nd Year)
- Vikram (CSE, 2nd Year)

Innovation:

Improvements may include biometric integration to better detect impairment, AI for more accurate data analysis, wireless connectivity for real-time reporting, and user customization for tailored settings. These enhancements will further improve the system's functionality and acceptance.

Summury:

The alcohol detection and engine locking system is an essential tool for improving road safety and preventing alcohol-related accidents. While it has limitations, it offers a proactive approach to addressing drunk driving. Future innovations will continue to advance its accuracy and effectiveness.

For more information please visit :

https://onedrive.live.com/edit.aspx?resid=71CDDDCB5EAE2DCA!2865&cid=71cdddcb5eae2dca&auth
key=!AIXt6WenHP24eug&CT=1726801413247&OR=ItemsView

CONCLUSION:

Overall event went successfully on the presentation of the models to the Jury members and a valid and perfect judgement. The teams performed with all stratergies.

Dr. Prathibhadevi Tapashetty   **Dr. Rajeshwar Kadahevaramath**   **Dr. Santosh M Muranal**

IIC Convener   **Dean Academics**   **Principal**