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PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

PEO 1: Employment/Higher studies: To impart and disseminate sound knowledge to the students on the fundamentals of mathematics and advanced fields of computer science and interrelated disciplines to solve simple and complex engineering problems and train them to achieve sustainable growth in their professional career.

PEO 2: Discipline Knowledge: To enhance the ability of students to evaluate the specific requirements of software industry and provide innovative engineering solutions and efficient product designs.

PEO 3: Individual Skills: To facilitate the students to make use of their technical competency to identify and develop appropriate product design, development, testing, maintenance, analysis of problems and provide corrective measures.

PEO 4: -Professional, Personality and Presentation: To enable the students to develop strong leadership qualities with aggressive optimism, multidisciplinary skills, excellent communication skills and function as effective and reliable team members giving importance to professional and ethical principles.

PEO 5: Environment: To inculcate in the students to associate in social networking, pursue continued learning of the latest developments in Computer Science and involve in higher research and contribute to the development of software industry and related engineering fields.

PROGRAM SPECIFIC OBJECTIVES (PSOs)

PSO 1: To inculcate technical skills to analyze, design networking, web services, multimedia, big data analytics and recent topics of varying complexity.

PSO 2: To develop the capability to comprehend and solve the interdisciplinary problems through appropriate technology with the understanding of contemporary business environment.

PSO 3: To develop an ability to utilize the latest technology and platforms to become a triumphant professional, successful entrepreneur and an urge for pursuing higher studies.

DEPARTMENT MISSION

M1: To develop our department as a center of excellence, imparting quality education, generating competent and skilled manpower.

M2: To prepare our students with high degree of credibility, integrity, ethical standards and social concern.

M3: To train our students to devise and implement novel systems, based on Education and Research.

DEPARTMENT VISION

To provide an academically conducive environment for individuals to develop as technologically superior, socially conscious and nationally responsible citizens.

PROGRAM OUTCOMES (POs)

PO1 (Engineering knowledge): Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2 (Problem Analysis): Identify, formulate, research literature, and analyze complex engineering problem reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3 (Design/development of solutions): Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4 (Conduct investigations of complex problems): Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5 (Modern tool usage): Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6 (The engineer and society): Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the Professional engineering practice.

PO7 (Environment and sustainability): Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8 (Ethics): Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9 (Individual and team work): Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings

PO10 (Communication): Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11 (Project management and finance): Demonstrate knowledge and understanding of the engineering and management principles and apply these to on as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12 (Life-long learning): Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

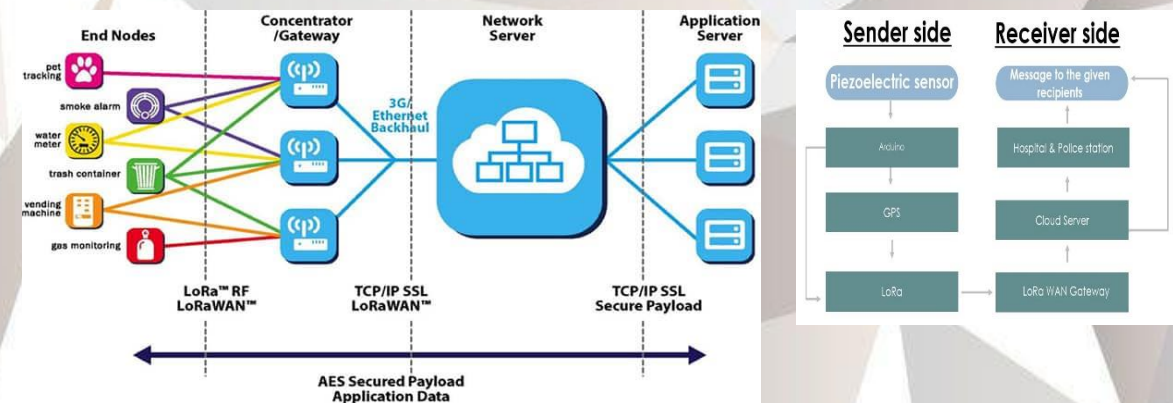
Accident Alerts using LoRa-Based IoT System

-Article by CHANDRA MOHITH P (II I)

In today's fast-paced world, vehicular accidents in remote and uncovered areas often present a significant challenge in promptly communicating distress signals. Addressing this critical issue, our innovative project introduces an Accident Alert System using LoRa-based IoT technology. This groundbreaking system is designed to seamlessly detect, communicate, and dispatch crucial accident information to emergency response centers and designated contacts.

Introduction:

Vehicular accidents in remote and non-covered areas frequently result in delayed or absent notifications to emergency services due to the lack of immediate communication infrastructure. Our solution involves an advanced Accident Alert System integrating LoRa (Long Range) technology with IoT devices to bridge this communication gap effectively.



Technical Workflow:

The heart of the system lies in a piezoelectric sensor installed in the vehicle. This sensor converts force generated during an accident into an electrical signal. Once the sensor detects impact within a specific frequency range, it triggers the Arduino Uno. The Arduino processes this signal, activating the GPS module to pinpoint the exact location of the accident. Subsequently, the location data is transmitted to a LoRa WAN gateway. With an impressive transmission range of 600 to 800 km, the gateway effectively relays this information to the nearest emergency response center and also to a pre-specified contact number provided by the user.

Execution and Impact:

This innovative system fills the void in emergency communication by enabling real-time transmission of accurate accident data. The seamless integration of LoRa technology ensures that even in remote areas lacking traditional communication infrastructure, distress signals can swiftly reach relevant authorities and contacts, thereby expediting rescue operations.

The implementation of this system significantly reduces response times, thereby enhancing the chances of prompt medical assistance for accident victims. Through this solution, lives can potentially be saved, injuries mitigated, and emergency services efficiently dispatched to remote accident sites.

Conclusion:

The Accident Alert System using LoRa-based IoT technology stands as a beacon of hope for remote areas by revolutionizing the way distress signals are communicated during vehicular accidents. By seamlessly integrating piezoelectric sensors, GPS technology, Arduino Uno, and LoRaWAN gateways, our system serves as a crucial link in the chain of emergency response, ensuring swift and effective assistance, even in the most isolated areas.

With our project, we aspire to reshape emergency response dynamics, minimizing the impact of accidents in remote and uncovered regions. The advancement of technology, when utilized for the greater good, can truly make a substantial difference in saving lives and ensuring the safety of individuals in need.



Empowering Farmers: Introducing Code Green:

In today's rapidly evolving world, the agricultural sector faces a pressing issue: the disproportionatedistribution of profits between hardworking farmers and intermediaries. Addressing this challenge head-on, Code Green stands as a beacon of innovation, aiming to revolutionize the agricultural landscape by empowering farmers and reshaping the dynamics of agricultural trade.

The Problem:

For too long, middlemen have reaped substantial commissions, leaving farmers with a meager share of their deserved profits. This discrepancy has impeded the growth and prosperity of those toiling in the fields, jeopardizing the sustainability of our food production systems.

The Code Green Solution:

Code Green is more than just an idea; it's a transformative solution design to bridge the gap between farmers and buyers. Our pioneering platform is global social media application exclusively tailored for farmers. It acts as a conduit connecting these vital stakeholders with industrial buyers, revolutionizing the way agricultural products are traded.

Features:

Direct Farmer-Buyer Connection:

Our platform enables direct communication between farmers and industrial buyers, fostering transparent and fair trade practices. Farmers have the opportunity to showcase their produce, while buyers can browse and engage directly, ensuring fairer pricing and increased profits for the farmers.

Logistics Ecosystem:

To streamline the process, Code Green offers a unique feature that allows farmers to book vehicles for farming and exporting. This comprehensive logistical integration ensures a smooth and efficient exchange of agricultural products, eliminating unnecessary delays and challenges.

Global Reach:

With a global perspective, Code Green aims to connect farmers and buyers worldwide, transcending geographical boundaries to create an inclusive marketplace for agricultural exchange.

Impact

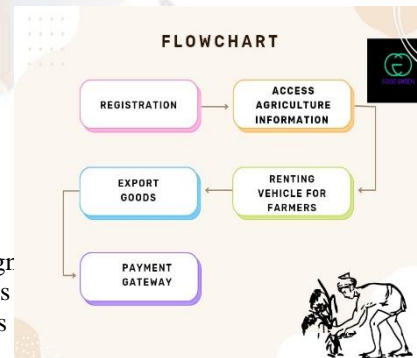
The implications of Code Green are far-reaching. By empowering farmers and facilitating fairer pricing, we not only foster a more equitable agricultural ecosystem but also contribute to global food security and sustainability.

Vision

Our vision is to create a world where farmers are rightfully recognized and compensated for their hard work. We strive to build a platform that not only revolutionizes agricultural trade but also stands as a testament to the power of technology in bringing about positive change.

Conclusion:

Code Green is not just a project; it's a mission. It is an endeavor to create a world where farmers are not just beneficiaries of change but drivers of it. Join us in this journey towards a more equitable, efficient, and sustainable agricultural future.



YOUNG INSPIRING MINDS

"India's Path to Superpower: A Quest for Responsibility and Patriotism"

-Article by HEJOE ANTO J (III E)

Introduction:

India achieved independence in 1947, marking 76 years of its journey towards development and superpower status. However, the dream of becoming a superpower remains unfulfilled. In this article, we delve into the factors that have contributed to India's current state, examine the roles of politicians and the people, and offer insights on where the nation may have gone astray.

Historical Background:

India, with a population of around 1.4 billion and a vast landmass, began its post-independence journey from a challenging position, having endured British colonial exploitation. At the time of independence, India's population was approximately 34 crores, while China's was about 46 crores. China's remarkable economic growth, with a GDP 5.46 times higher than India's, raises questions about India's pace of development. Because citizens of china wokred atleast 14 hours a day to make their living working really hard towards their countries growth.

Brain Drain and the Western Attraction:

One of India's significant challenges is the phenomenon of "brain drain." Many educated Indians seek opportunities abroad, resulting in a loss of talent. The allure of a sophisticated life in Western countries often overshadows the idea of contributing to India's development.

Contrasting Case: Israel's Model- Hejoe's Theroy

To illustrate the importance of discipline and patriotism, let's consider two hypothetical individuals. Rahul, born in India, and Adam, born in Israel, both study well and go abroad. However, Adam's mandatory service in the Israeli defense forces instills discipline and patriotism in his life. This exemplifies the power of a strong national defense in fostering national pride and unity, which India can learn from. Here the Question is what is the contribution made by Rahul towards fostering his country?

"Citizens of Israel from around the world came to Israel to support the troops during the ongoing war"- According to CNN. In my view this is the real patriotism.

A Call for Responsibility:

Patriotism goes beyond flag hoisting on Independence Day. It entails active contributions to society's growth. India's cultural diversity and traditions can be powerful tools for development. The nation's vast pool of talent, commitment to equality, and unity in diversity should be harnessed.

Israel's Technological Advancements:

Israel, with a population of around 9 crore, is a technological powerhouse. Innovations like the Iron Dome, AI, and Pegasus demonstrate that even smaller nations can have a significant impact on the global stage. India can take inspiration from Israel's achievements in technology and innovation.

The Unfulfilled Vision of Dr. APJ Abdul Kalam:

The late Dr. APJ Abdul Kalam envisioned India as a developed country by 2020. However, as we approach the end of 2023, this dream remains unfulfilled. I think the India's missile man, The scientist, The president, Dr.Kalam does't make a prediction without the analysis of the countries growth. What ever may be mistake, wherever may be the mistake there is still a fault in us.

Changing Attitudes and Encouraging Youth:

Shifting from an "I, me" mindset to a "we, us" perspective is essential. Embracing the principles of the Indian Constitution, fostering discipline, and respecting diversity are vital steps. Encouraging young talent and promoting gender equality are keys to India's progress.

Revolutionary Phase:

India's journey towards superpower status demands a collective commitment from its people. Responsibility, discipline, and a profound sense of patriotism are fundamental to this endeavor. Drawing inspiration from global success stories such as Israel and China and embracing the wisdom of India's diverse culture, the nation can move closer to realizing its full potential. The dream of becoming a developed superpower can only be fulfilled through the combined efforts of individuals and society.

We must actively seek out careers in sectors like Defense, Civil Services, Indian Engineering Services, and Indian Economic Services, while also contributing to NGOs dedicated to the nation's betterment. The youth should engage in politics and consider agriculture as a viable career choice, which often goes overlooked. Every citizen should adopt a soldier's ethos, even when living civilian lives. We are bound to uphold our constitutional duties without compromising our rights.

Staff Achievements

- Dr. Jabasheela L has been awarded the Outstanding Research Award
- Dr. Subedha V has been awarded the Best Researcher Award
- Dr. Rajendiran M has been appointed as an Advisory Committee Member for international conference and Proctor for IEEE Xtreme 17.0
- Dr. Valarmathi K has been appointed as Proctor for IEEE Xtreme 17.0.

Student Achievements

- D. Madhavkumar has been recognized as an AWS Cloud Captain in AWS Cloud Labs
- .M. Rishyendra has been awarded 7500 USD in the Microsoft Bounty Program.
- Suraj emerged victorious in Kavach 2023 (Cyber Security Hackathon), securing a prize of Rs. 100,000.
- Samuel Varghese J & Team secured the 1st Runner-Up position in CTS-TECHATHON 1.0, earning a prize of Rs. 7500.
- R. Abhishek & Team Metaverse clinched the 1st Prize in the Project Contest, earning Rs. 50,000.
- Arjun emerged victorious in the Smart India Hackathon 2023, securing a prize of Rs. 100,000.
- Mohan Raj secured the Silver and Bronze medals in the Bodybuilding Championship