Bapuji Educational Association ®

Bapuji Institute of Engineering and TechnologyDavangere-577004

"Green & Eco-Friendly Campus Initiatives – Department of Information Science And Engineering"

March 2024-25

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Certificate

This is to certify that the Green & Eco-Friendly Campus initiatives documented in this report have been genuinely undertaken by the **Department of Information Science And Engineering** during the academic year 2024-25 and are submitted for AICTE compliance.

Date: Signature of HoD

Declaration

I hereby declare that the information provided in this report is true, accurate, and supported by verifiable documentary evidence.

Name: Sahana N A

Signature:

Designation: Assistant Professor

Date:

INDEX:

Introduction

Brief profile of the department

The Department of Information Science and Engineering focuses on imparting quality education in the field of computing and information technologies. The curriculum is designed to provide a strong foundation programming, data structures, algorithms, database management systems, operating systems, computer networks, and software engineering, along with emerging areas such as artificial intelligence, machine learning, data science, cloud computing, cybersecurity, and Internet of Things (IOT). The four -year B.E. program emphasizes both theoretical knowledge and practical skills through well-equipped laboratories, mini projects, internships, and industry-oriented training. The department encourages innovation, research, and problem- solving abilities among students. Graduates of the program are well prepared for careers in software development, IT services, data analytics, system administration, research, and higher studies, contributing effectively to the digital and information driven society.

 Importance of sustainability and green practices in the department

Sustainability and green practices are central to the Information Science and Engineering department by promoting responsible use of technology and digital resources. These practices are integrated into both academic and administrative activities through projects related to green computing, energy efficient algorithms, cloud optimization, and sustainable software design. Paperless practices such as digital notes, online submissions, e-learning platforms are widely followed. Proper e-waste management is ensured by safe disposal and recycling of outdated electronic equipment. Students are encouraged to work on projects related to smart systems, digital solutions for sustainability, and eco-friendly IT applications. These initiatives help students understand the role of information technology in supporting development.

Waste Management

Student Coordinators:

1. Adarsh Pal S(4BD22IS003)
2. Spoorthi G R(4BD22IS155)
3. Siri Nadig K Y (4BD22IS152)
4. Abhishek G V (4BD21IS001)

Contribution to Any National Level Initiative of Government of India – Swachh Bharat

- No of drives (how many times visited) conducted - 01
- No of people sensitized (beneficiaries) - 10
- Name of the Village/ Place - Davanagere

Introduction:

The Swachh Bharat Abhiyan (Clean India Mission) is a national-IeveJ initiative launched by the Government of India in 20 J 4, aimed at promoting cleanliness, sanitation, and the eradication of open defecation across the country. Its primary goal is to inspire citizens to take responsibility for maintaining a clean environment, both at the individual and community levels. In alignment with this vision On 9th December 2024 we organized a ' campus cleanliness drive to contribute to the broader Swachh Bharat initiative. By focusing on cleanliness within our college, Bapuji Institute of Engineering and Technology, Davangere, we not only aimed to beautify the campus but also sought to raise awareness among students about the importance of maintaining a clean and hygienic environment, which is essential for public health and well-being. This initiative also underscored the role that educational institutions play in promoting civic responsibility and instilling values related to cleanliness and environmental sustainability in the younger generation. It was an opportunity for students to actively participate in creating a cleaner, healthier space and to further the mission of Swachh Bharat in their own immediate surroundings. Through this drive, we aimed to reinforce the significance of individual contributions to the larger national goal of sanitation and environmental cleanliness.

Planning and Organization

The planning for the campus cleanliness drive begins with the identification of areas within the college that needed the most attention, such as playgrounds, parking slots and open spaces. A team of 10 students are formed, and roles were assigned to ensure smooth execution of the event. We coordinated with the college administration to secure necessary approvals and materials for the cleaning activity, including dustbins and cleaning tools. In addition to the actual cleaning work, volunteers were briefed on the significance of maintaining cleanliness not just on the day of the event, but as a continuous practice in their daily lives. The activity was planned to be executed in a systematic manner, ensuring that the college campus would be thoroughly cleaned and left in a better condition.

Fig 1.1 Pictures at Bapuji Institute of Engineering and Technology

Fig 1.2 Pictures of cleaning college surroundings.

Activities Conducted:

The cleanliness drive begins with all of us gathering at a designed meeting point on campus, where we were provided with the necessary cleaning supplies, such as garbage bags and disinfectants. The group was then divided into smaller teams, with each team assigned a specific area of the campus, such as playgrounds and open spaces. We worked diligently to pick up litter and ensure that all visible waste was collected. Any waste left in open spaces was gathered to maintain a tidy environment. The goal was to ensure that every corner of the campus was thoroughly cleaned and free from any litter.

Throughout the event, the focus remained on teamwork and efficient execution. We worked systematically to ensure that no area was overloaded, and the entire campus received attention. By the end of the event, the campus was visibly cleaner, leaving behind as sense of accomplishment and a renewed awareness about the importance of keeping the surroundings clean.

Outcomes:

The cleanliness drive had a noticeable impact on both the college campus and the participants. By the end of the event, the campus was visibly cleaner, with major areas being properly tidied up and waste collected and disposed of responsibility. The imitative instilled a sense of responsibility among students regarding cleanliness and environmental sustainability. The active participants of students demonstrated the potential for collective action to achieve significant results in maintaining a cleaner environment.

Additionally, the event served as a remainder to the college community about the importance of everyday hygiene practices. The drive also contributed to the broader Swachh Bharat mission by directly engaging students in the practical aspect of the initiative, encouraging them to take ownership of their environment. The event highlighted the importance of collaboration and ongoing efforts to create a cleaner, healthier living space for all.

Organic Farming and Waste Management

Usefulness of organic farming wet waste management in neighbouring villages and implementation in the campus. To visit any of neighbors village farm to know about organic farming.

On 4th Dec 2024, The students visited ICAR Tarabalu Krishi Vigyan Kendra davanagere, for demonstration of organic forming and waste management.

Krishi Vigyan Kendra or Farm Science Centre is a district level organization established for transfer of advanced agricultural technologies to the farming community of the district. Our Krishi Vigyan Kendra mainly aims to improve the production and productivity in agriculture and allied sectors. Davanagere district has a highly diversified agricultural scenario with dryland agriculture being dominant.

Plantation and Adoption of Tree

Student Coordinators:

1. Ningaraj Rajkumar Tenihalli (4BD23IS092)
2. Maithreayi D Hampole (4BD22IS073)
3. Kshema S (4BD23IS064)
4. Lankesh K M (4BD23IS067)

Plantation of a tree that will be adopted for four years by a group of students. They will also make an except either as a documentary describing the origin. Plantation of a tree in convenient area and adopting the same.

On 4th October 2024, as a part of SCR activity we visited a nearby area in our college campus and planted a Pongamia plant.

Water Conservation :

AIM: Knowing the present in the surrounding villages and implementation in the campus. To visit any one of the lake or river to know about rain water harvest.

On 21 Nov 2024, as a part of SCR activity we visited a ‘Shanthisagara lake’.

Shanthisagara Lake:

Rainwater Harvesting:

A network of trenches and channels has been constructed around the lake's catchment area. These channels divert rainwater runoff from nearby fields and roads, directing it towards the lake, replenishing its water reserves. Additionally, rooftop rainwater harvesting systems are being implemented in surrounding houses and buildings, further contributing to the lake's water storage.

Check Dams and Percolation Ponds:

Small check dams have been built on streams feeding into the lake. These dams slow down the flow of water, allowing it to percolate into the ground, replenishing the lake's underground water source. Percolation ponds, shallow, dug-out structures, are also being used. These ponds collect rainwater and allow it to gradually seep into the ground, contributing to the lake's overall water level.

Afforestation:

Planting trees around the lake's catchment area plays a crucial role in water conservation. Trees act as natural filters, absorbing pollutants and preventing soil erosion. Additionally, they help regulate the local climate, promoting rainwater retention in the soil and reducing evaporation from the lake's surface.

Projects:

1. Crop yield Prediction and Climate Change Impact Assesment Using Machine Learning:

USN	Student Name	Guide
4BD21IS080	Pooja Ravi	
4BD21IS131	Sneha S	Vinutha D
4BD21IS133	Spandana K	
4BD21IS137	Srusti B	

Abstract:

Climate change has significantly affected agricultural productivity through variations in temperature, rainfall, humidity, and extreme weather events. Accurate crop yield prediction is essential for food security, farm planning, and policy-making. This project uses machine learning techniques to predict crop yield based on historical agricultural and climatic data while assessing the impact of climate change variables on crop productivity. Models such as Linear Regression, Random Forest, Support Vector Machines, and Neural Networks are trained and evaluated to identify the most accurate prediction approach. The system helps farmers, researchers, and governments make data-driven decisions to adapt to climate variability.

2. AGRO ADVISERS (Crop and Fertilizers Recommendation)

USN	Student Name	Guide
4BD21IS041	Ganesh S S	
4BD22IS407	Ranganath Babu R	Dr. Poornima B
4BD21IS021	Bhuvan L Bankar	
4BD21IS107	Rohan U	

Abstract:

Agriculture productivity largely depends on appropriate crop selection and efficient nutrient management. Agro Advisers play a crucial role in supporting farmers by providing scientific and location-specific recommendations for crops and fertilizers. By analyzing soil characteristics, climatic conditions, water availability, and cropping history, agro advisory systems help farmers choose suitable crops and determine the correct type, quantity, and timing of fertilizer application. This approach minimizes resource wastage, reduces input costs, improves soil health, and enhances crop yield and quality. With the integration of soil testing, expert knowledge, and modern technologies such as data analytics and digital advisory platforms, agro advisers contribute to sustainable and profitable farming practices, ensuring long-term agricultural resilience and food security.