“VanyaSparsh”
Second year Mini Project Report

Submitted in partial fulfillment of the requirements

of the degree

BACHELOR OF ENGINEERING IN COMPUTER ENGINEERING

By

Ritu Ruprela D7B/45

Roshni Gurbani D7A/27

Raheni Ajwani D7A/04

Priya Anandnai D7A/05

Asmi Rajbhar D7A/70

Supervisor

Prof. Mrs. Vidya Zope

Department of Computer Engineering

Vivekanand Education Society’s Institute of Technology

HAMC, Collector’s Colony, Chembur,

Mumbai-400074

University of Mumbai

(AY 2023-24)

CERTIFICATE

This is to certify that the Mini Project entitled **" VanyaSparsh "** is a bonafide work of **Ritu Ruprela(45), Roshni Gurbani(27), Raheni Ajwani(04), Priya Anandani(05) and Asmi Rajbhar(70)** submitted to the University of Mumbai in partial fulfillment of the requirement for the award of the degree of **"Bachelor of Engineering"** in **"Computer Engineering" .**

(Prof.Mrs. Vidya Zope)
Supervisor

(Prof. Nupur Giri)
Head of Department

(Prof. J.M Nair)
Principal

Mini Project Approval

This Mini Project entitled " VanyaSparsh **"** by **Ritu Ruprela(45),Roshni Gurbani(27), Raheni Ajwani(04), Priya Anandani(05) and Asmi Rajbhar(70)** is approved for the degree of **Bachelor of Engineering** in **Computer Engineering.**

Examiners

1……
(Internal Examiner Name & Sign)

2……
(External Examiner name & Sign)

Date:

Place

:

Contents

1. Introduction

1.1 Introduction

Deforestation and climate change are pressing environmental issues with interconnected implications for ecosystems and societies worldwide. Forests play a crucial role as carbon sinks, absorbing carbon dioxide (CO2) through photosynthesis and helping to stabilize the Earth's climate. As forests are cleared, their ability to sequester carbon diminishes, leading to increased CO2 emissions. This contributes to climate change, exacerbating weather patterns, biodiversity loss, and the vulnerability of communities to natural disasters. Understanding the root causes and consequences of deforestation on climate change is crucial for addressing these challenges and preserving the health of our planet.

1.2 Motivation

Motivation related to the topic of deforestation and climate change is abundant and compelling. Here are some motivational points:

1) **Environmental Stewardship**: By addressing deforestation and climate change, we are taking proactive steps to protect and preserve the natural world for future generations. It's about being responsible stewards of our planet's resources and ensuring its health and sustainability.

2) **Global Impact**: The effects of deforestation and climate change are not confined to specific regions or countries; they have far-reaching consequences that affect us all. By tackling these issues, we can make a positive impact on a global scale, promoting a healthier and more resilient planet for everyone.

3) **Biodiversity Conservation**: Forests are home to a vast array of plant and animal species, many of which are unique and irreplaceable. By combating deforestation, we can help preserve biodiversity and protect endangered species from extinction.

4) **Human Well-being**: Healthy forests and a stable climate are essential for human well-being. Forests provide vital ecosystem services, such as clean air and water, food security, and natural resources. Addressing deforestation and climate change helps safeguard these benefits for present and future generations.

5) **Economic Opportunities**: Transitioning to sustainable land use practices and investing in forest conservation and restoration initiatives can create economic opportunities, such as ecotourism, sustainable agriculture, and green jobs. By embracing these opportunities, we can foster economic growth while also protecting the environment.

1.3 Problem Statement & Objectives

Problem Statement

Deforestation, characterized by the extensive removal of trees from forests, has become a prominent driver of climate change. This interconnection between deforestation and climate change poses substantial implications for both the environment and society. Understanding the relationship between deforestation and climate change is essential for comprehending how deforestation exacerbates the challenges associated with climate change.

Objectives

1) To examine the mechanisms through which deforestation contributes to climate change, including the release of carbon dioxide (CO2) emissions and alterations in local and global climate patterns.

2) To assess the impacts of deforestation on the Earth's carbon cycle and atmospheric composition, with a focus on the depletion of carbon sinks and the increase in greenhouse gas concentrations.

3) To investigate the secondary effects of deforestation on climate change, such as changes in land surface and regional weather extremes.

4) To explore mitigation and adaptation strategies aimed at addressing deforestation-related climate change, including forest conservation, reforestation, sustainable land management practices, and policy interventions.

5) To raise awareness and promote education about the importance of preserving forests and combating deforestation as integral components of global climate action and environmental sustainability.

1.4 Organization of the Report

The report's structure follows a logical progression, with the Introduction section (1) setting the foundation for the entire document. In Introduction (1), we provide a broad overview of he topic, followed by Motivation (1.2) that articulates the driving forces behind our research or project. Subsequently, we delve into the Problem Statement & Objectives (1.3) section, which defines the specific issue we aim to address and lays out our intended objectives. The organization of the report (1.4) is then presented to give readers a clear roadmap of the report's structure. Transitioning into the Proposed System (3), we introduce an innovative approach or system. Within the Introduction (3.1), we offer a comprehensive overview of our proposed system. The Architecture/Framework (3.2) section provides detailed insights into the system's structure and framework, while Algorithm and Process Design (3.3) elaborate on the methodologies we've employed. Details of Hardware & Software (3.4) shed light on the technological aspects of our system. The Experiments and Results (3.5) section presents the outcomes of our research, and the Conclusion and Future Work (3.6) encapsulate the key findings and chart the course for future research directions.
Lastly, the References section serves as a comprehensive compilation of all the sources referenced throughout the report. This section allows readers to delve deeper into the works cited within the document.

2. Literature Survey

2.1 Survey of Existing System

No.	Title	Publication Year	Summary
1.	Climate change and its impact on biodiversity and human welfare	02 May 2022 by K.R Shivanna	To Enhance the knowledge about climate change and deforestration.
2.	Deforestation is a Cause of Pandemic – A Systematic Analysis	28 December 2020 By K.G Dharani & others	Pandemic diseases are affecting humans at an uncommon rate.
3.	Carbon Footprint Calculation: Insights from a Usability Study	28 October 2019 by Girish Bekaroo & Divesh Roopowa	The study explores the usability of a carbon footprint calculator,highlighting its importance in quantifying individual CO2.
4.	Platforms To Calculate Carbon Footprints: A Step Towards Environment Sustainability	08 June 2023 by Chinmayee Chatterjee, Rishab Gupta & others	Proposing a framework for carbon footprint recommendation system to bridge existing gaps and challenges.

2.2 Limitation Existing system or research gap

1) **Incomplete Understanding of Regional Dynamics:** Existing research often focuses on global trends in deforestation and climate change, overlooking regional variations and specific drivers of deforestation in different geographic contexts. This limitation hinders the development of targeted mitigation and adaptation strategies tailored to local conditions and needs.
2) **Lack of Longitudinal Studies**: Many studies on deforestation and climate change rely on cross-sectional data or short-term observations, which may not capture the long-term dynamics and trends accurately. There is a need for longitudinal studies that track changes in forest cover, carbon stocks, and climate variables over extended periods to assess the cumulative impacts of deforestation on climate change.

3) **Limited Integration of Social and Environmental Factors**: Research often focuses on the ecological aspects of deforestation and climate change, neglecting the social, economic, and political dimensions. There is a need for interdisciplinary approaches that integrate social science perspectives to understand the underlying drivers of deforestation and the socio-economic impacts on local communities.

4) **Data Gaps and Inconsistencies**: Data availability and quality vary across regions and countries, leading to gaps and inconsistencies in assessing the extent and impacts of deforestation on climate change. Improving data collection methods, standardizing measurement protocols, and enhancing data sharing mechanisms are essential to address these limitations.

2.3 Mini Project Contribution

Impactful Contributions and Positive Effects of our website “VanyaSparsh”

Environmental Preservation: "VanyaSparsh" contributes to the preservation and conservation of the environment by raising awareness about deforestation and its impact on climate change. It educates users about the importance of protecting forests and biodiversity.

Education and Awareness: The project educates users about deforestation, its causes, and its effects on the environment and climate. It promotes a deeper understanding of the urgent need for action to address deforestation and climate change.

Responsible Environmental Practices: "VanyaSparsh" encourages responsible environmental practices by advocating for sustainable living, promoting eco-friendly habits, and raising awareness about the importance of reducing carbon footprints.

Support for Sustainability: "VanyaSparsh" is dedicated to supporting sustainable environmental practices. By advocating for responsible environmental behavior, the project contributes to the long-term sustainability of the environment and helps mitigate climate change.

Environmental Conservation Initiatives: A portion of the project's resources or revenue can be allocated to support environmental conservation initiatives, such as reforestation projects, wildlife conservation efforts, or campaigns to protect endangered species.

User Advocacy: " VanyaSparsh " motivates users to become advocates for environmental conservation. By educating them about the importance of protecting the environment, the project inspires users to take action and support environmental protection initiatives.

3. Proposed System

3.1 Introduction

The idea is to create a user – friendly and educational website named “VanyaSparsh” which will provide a better platform for the understanding of deforestation and measures that can contribute for the betterment in the same regard as well as climate changes with the help of the various interactive ideas and technology.
The user’s choices to just gain knowledge or contribute for the betterment of the cause, etc. will be taken into consideration while making the website.

Remembering to prioritize user experience, accessibility, and up-to-date information to make your deforestation website an effective tool for educating and mobilizing people to combat deforestation

3.2 Architecture/Framework

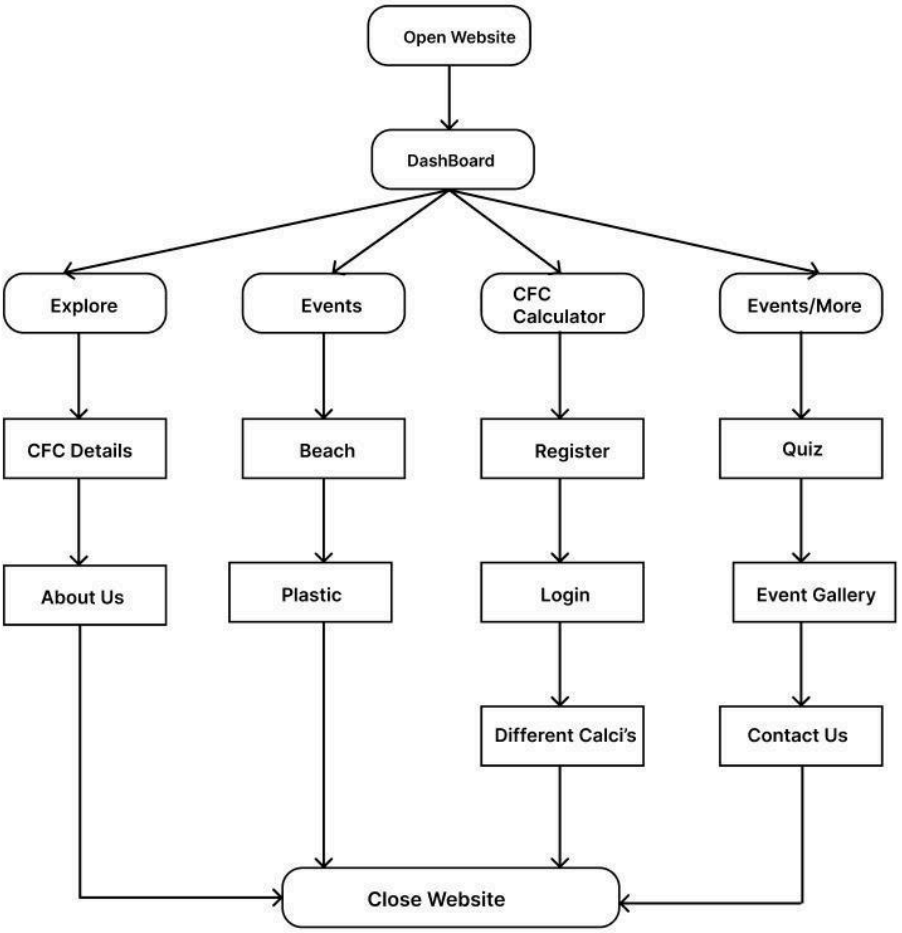

Fig 1: Flow of app.

3.3 Algorithm and Process Design

To create a successful heritage app, it's important to follow a detailed process. This process can be broken down into several steps:

1. Research and Conceptualization.
2. Planning and Design.
3. Content Creation and Collection.
4. Technological Development.
5. Features Implementation.
6. User Engagement and Feedback.

3.4 Details of Hardware & Software:

Server Infrastructure:
A server infrastructure is required to host the app's backend services, databases, and content delivery systems. We've used SQL for database management.

Programming Languages:
Use languages like HTML,CSS and JavaScript for Interface.

Backend Development:
Choose a suitable database management system like MySQL,PHP and Xampp

Design Tools:
Use design software like Figma UI/UX designs.

3.5 Experiment and Results

Fig 3.5.1 Home Page of website

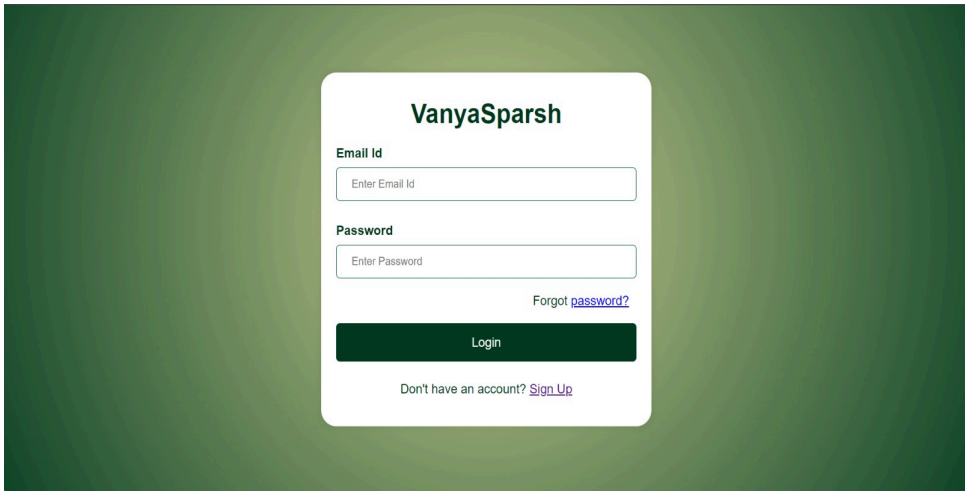

Fig 3.5.2 Login Page of website

Fig 3.5.3 CFC Calculator

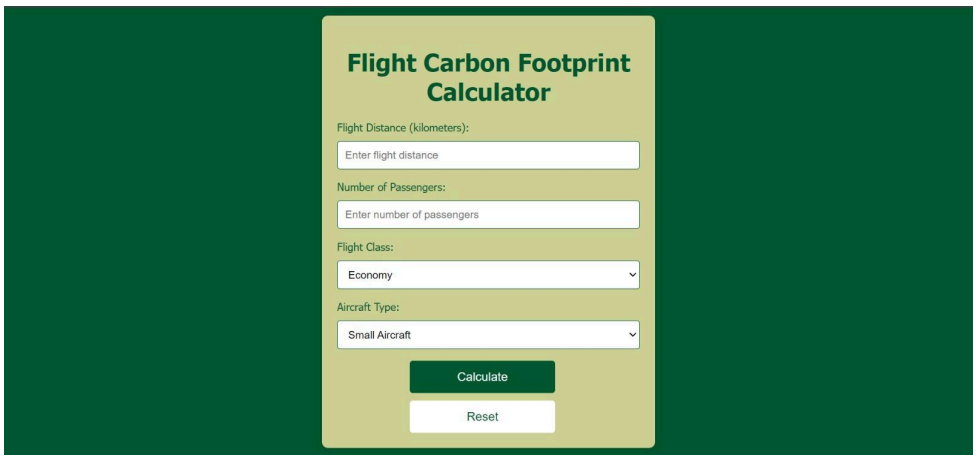

Fig 3.5.4 Flight CFC Calculator

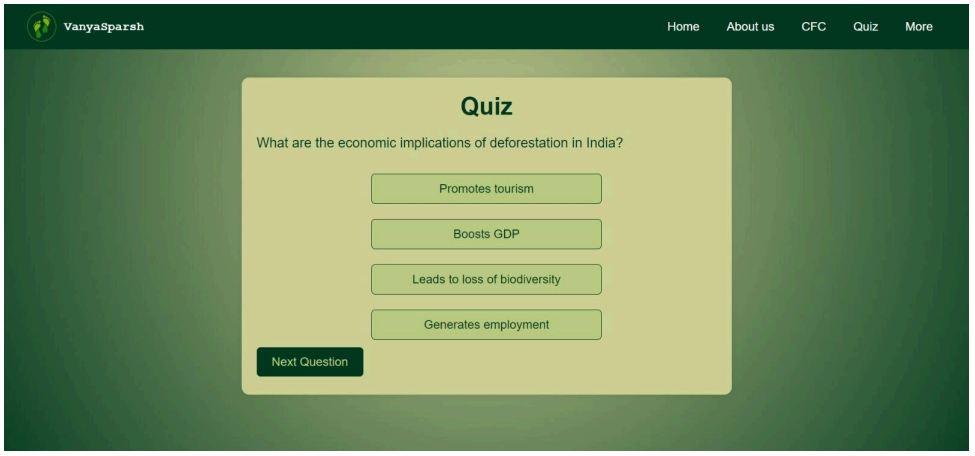

Fig 3.5.5 Quiz Page of website

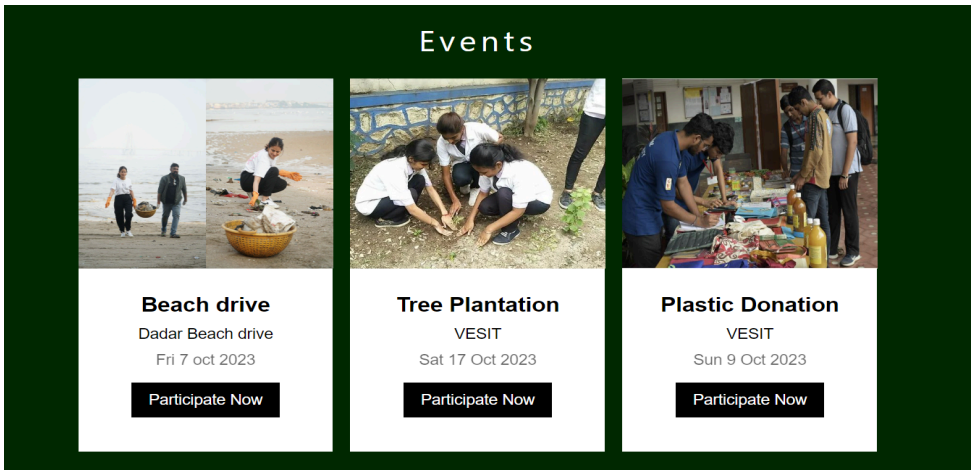

Fig 3.5.6 Event Participation

3.6 Conclusion and Future work.

Vanyasparsh website is a comprehensive platform dedicated to environmental awareness and activism, featuring engaging content across multiple pages. Our website isn't just about information; it's a vibrant community of individuals passionate about protecting our forests and tackling climate change.

We're here to educate, engage, and inspire action. The inclusion of carbon footprint calculators empowers individuals to understand and mitigate their environmental impact, while quizzes on deforestation deepen knowledge and foster a sense of responsibility towards biodiversity preservation. With every click and every shared story, we're working towards a greener, more sustainable future. Join us in making a real impact on our planet.

References

[1] G. Bekaroo, D. Roopowa and C. Bokhoree, "Mobile-Based Carbon Footprint Calculation: Insights from a Usability Study," 2019 Conference on Next Generation Computing Applications (NextComp), Mauritius, 2019, pp. 1-6, doi: 10.1109/NEXTCOMP.2019.8883622.

[2] C. Chatterjee, R. Gupta, K. Gupta and N. Hasteer, "Platforms To Calculate Carbon Footprints: A Step Towards Environment Sustainability," 2023 International Conference on Advancement in Computation & Computer Technologies (InCACCT), Gharuan, India, 2023, pp. 394-399, doi: 10.1109/InCACCT57535.2023.10141821

[3] Abdurrahman, M.I., Chaki, S., Saini, G.: Stubble burning: effects on health & environment, regulations and management practices. Environ. Adv. (2020).

[4] R. Dhaya, "Deep Net Model for Detection of Covid-19 using Radiographs based on ROC Analysis", *Journal of Innovative Image Processing (JIIP)*, vol. 2, no. 03, pp. 135-140, 2020.