Green Connect: Social Media Platform for Environment

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ABSTRACT

The environment is the natural world, consisting of physical, biological, and chemical factors that influence the existence of life on Earth. The environment is critical in sustaining life and supplying the resources required for all organisms' existence and well-being. It is a complex system with interdependent components, in which changes in one component can affect others. Nowadays, the Environment is deteriorating rapidly, so to save it, we need to prioritise our goals for the Environment's welfare, as it is crucial to our survival. Various initiatives have been taken by several countries to protect and preserve nature. Green Connect is a small step toward implementing these initiatives on the ground. This paper is a study of a social media platform that can help spread awareness about the Environment, so that people can spend time with beautiful nature around them and share special memories through media. This study can promote new tree plantings in the surrounding areas for better Environmental health.

Keywords: *Environment, Deforestation, Green Connect, API, Android studio, Database.*

1. Introduction

Our Earth is made up of Purush (man) and Prakrati(nature or environment). The environment is defined as the natural world that surrounds us. It is our duty to protect this environment in order to live a healthy life. Our environment is not what it was 100 or 200 years ago. There is rapid environmental degradation. There is an increasing number of unprecedented environmental calamities. The global environmental situation is deteriorating, and the window of opportunity is closing. Unsustainable production and consumption patterns and trends, as well as inequality, combined with population-driven increases in resource use, put the healthy planet at risk, and there is a need to achieve sustainable development. Current and historical greenhouse gas emissions are exposing the planet to long-term climate change, creating a range of environmental and societal concerns. Pollution from the air is already linked to six to seven million premature deaths and is expected to have considerable detrimental health impacts by mid-century, causing five to seven million premature deaths each year. Biodiversity loss owing to changes in land use and fragmentation of habitat, excessive use and illicit trade in wildlife, invasive species, pollution, and climate change endangers ecosystem integrity and the Earth's ability to support human needs. Land degradation is becoming a growing danger to human health and ecosystems. Land degradation hotspots occupy approximately 29% of the global land surface and are home to 3.2 billion people. Given their high levels in our food, the adverse consequences of improper use of pesticides, heavy metals, plastics, and other pollutants are a major concern. So, according to this assessment, the key elements destroying our environment include global warming and changes in the climate, drought, excessive air pollution, degraded land and soil, loss of biological variety, deforestation, and rapid industrialization. The EPI (Environmental Performance Index) It is produced jointly by Yale University and Columbia University in partnership with the World Economic Forum. India is ranked 168 out of 180 countries, which is our main concern. This analysis reveals concerning patterns in carbon emissions from a few countries [2].
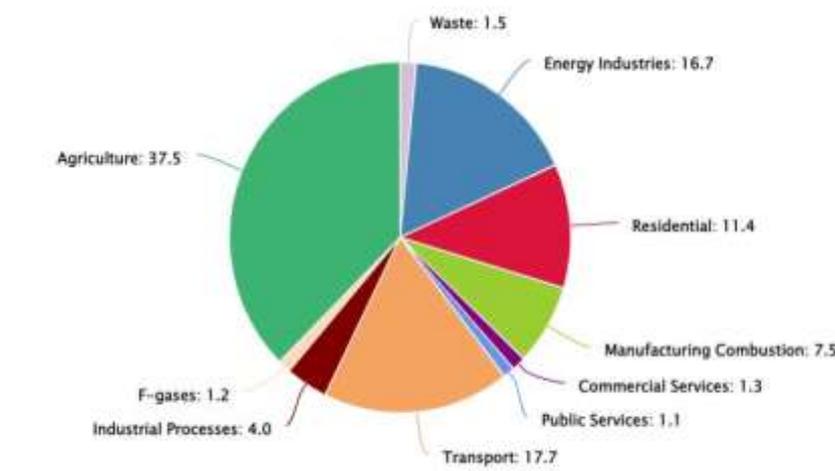
Fig. 1: Sector wise greenhouse gasses emission

It is clear that developed countries such as the United States, China, Russia, Germany, and the United Kingdom emit significant amounts of CO2. Due to the lack of carbon sinks i.e. various trees, plants etc. lead to this carbon dioxide presence in the environment which is very dangerous for us as well as other organisms on Earth.

2. Research Methodology

As indicated in (Table 1), 15 Indian cities are among the world's most polluted 20. This is a source of concern for us because we are already dealing with issues such as overpopulation, a shortage of resources, an economic crisis, and so on. As a result, a solid plan to tackle environmental concerns is required. In recent years, numerous techniques for object recognition have emerged, ranging from handcrafted feature-based methods to data-driven deep learning approaches. This literature view aims to provide a comprehensive overview of the significant advances and trends in object recognition research. Every individual need to contribute towards the health of environment in order to make our mother Earth sustainable for the upcoming generations. Better environment will ensure better quality of life for its individuals so that every can perform according to their potential.

In order to solve this Environmental problem, there is a requirement for both public and private sector participation [3]. All the countries across the globe should participate in a common dialog for increasing environmental health and keep a check on various activities which are harmful for the environment. Governments should implement strict policies in order to overcome this global environmental crisis.

Technology can help in ensuring global participation for the environmental cause. Social media apps can help in bringing people together to ensure a forestation and built an environment savings saving community which will voluntarily try to solve this global problem [4]. The social media apps which are present right now are not concentrating much on environment so there is a need for an app which can connect environment loving people and give various information about our environment.

Table 1: Top 20 Polluted Cities

Rank	Name of City	Pollution(PM 2.5)
1	Gurugram	136
2	Ghaziabad	135
3	Faisalabad	130
4	Faridabad	129
5	Bhiwandi	125
6	Noida	123
7	Patna	119
8	Hotan	116
9	Lucknow	115
10	Lahore	114
11	Delhi	113
12	Jodhpur	113
13	Muzaffarpur	110
14	Varansi	105
15	Moradabad	105
16	Agra	105
17	Dhaka	97
18	Gaya	96
19	Kashgar	96
20	Jind	91

This paper is a study of a social media app for environment loving people. People can share media related to plants, trees, environment etc. This platform will enable people to know about various plant species which can be helpful. The paper is divided into two sections:

Community – It is just like various social Media platforms where individuals can share images, information etc. every person will have a designated account in which he can share media. People can make a community by Following each other in order to be in contact.

Environment News Section – In this section user can find news and articles related to environment. This section will act as authentic source of information for users. Users can scroll down to see various news articles about environment of their choice.

3. Literature Review

Since the outbreak of World War I, rapid industrialization has further depleted natural resources; World War II prompted policymakers and financial professionals to emphasize the necessity of environmental awareness [5]. The National Environmental Policy Act (NEPA), which went into force on January 1, 1970, handles air pollution, water pollution, solid and hazardous waste management, and land management, and is recognized as the environment's Magna Carta. Engineering, economics, and the environment all play a role in the planning and decision-making process [6]. This cleared the door for a slew of subsequent multilateral treaties, including the Summit of Rio (1992), the Convention of Ramsar (1971), the Convention of Stockholm (2001), the Convention on Biological Diversity (1992), the Protocol of Kyoto (1997), and a slew of others. Green Connect App is a social media platform that allows people

who care about the environment to connect with one another and expand the community in order to save the environment from a variety of serious problems. The green Connect App is a complete program that uses a community of people to address environmental challenges [7]. This paper is concerned with a variety of issues such as pollution and deforestation. There is a similar application started by the environmental ministry of Madhya Pradesh in India under a scheme called Ankur. Under this scheme, an app named Vayudoot is launched in order to support a forest station in the state of Madhya Pradesh. The ministry asked the citizens of the state to download the app [8]. In this app, user needs to upload his/her tree plantation details. These details are stored in the database of the app. By the end of year, people who planted trees were awarded by the Chief Minister of MP. Our App is making a community where user can share media related to Environment. This app will allow users to react and comment on the post of other users. This app also provides a Environment's News section, which will be updated on Daily basis [9]. This Section will specifically show news only about the Environment collected from different sources. This App also contains a Tutorial Section which consists of links to videos about tree plantations, plantations at home, Natural home Decor etc. [10]. User can stream any video in order to gain knowledge about various procedures, plants etc. which can be beneficial for him. For detailed differences between Vayudoot App and Green Connect App refer to Table 2.

Table 2: Difference Table

S no.	Feature	Vayudoot	Green Connect
1	Image Upload	Yes	Yes
2	Users	MP State only	Global
3	Community	No	Yes
4	News Section	No	Yes
5	Tutorials	No	Yes
6	Storage	Yes	Yes

4. Problem Analysis

Nature refers to the general universe of living plants and animals, in some cases processes involving inanimate objects, the presence of specific species, and spontaneous changes on Earth, such as climate and geology [11]. In general, "environment" or wilderness refers to wildlife, rocks, forests, and generally anything that has not been significantly altered by human intervention or continues despite human intervention. For example, objects created and human interactions are not considered part of nature unless they are qualified as, for example, "human nature" or "tangible nature". A more traditional concept of natural things, the concept of nature that can still be found today, refers to the difference between natural and artificial, with artificial being understood as something created by the human mind [12]. Depending on the specific context, the term "natural" can be distinguished from natural or supernatural. In India, we call nature as "Mother nature" in order to thank the nature for providing us with Oxygen,

Water, food and protection whenever required. It is really a gift of God to mankind. Evolution of Nature was a very difficult and time taking process. It is said that it took millions of years for formation of Nature after the big bang which created the Earth. At first, there was a large landform called Pangea, then due to various movements it breaks down into seven major continents and the large Tethys Sea was divided in five major Oceans. Now on the continents life form evolved and through various discoveries different countries came into picture [13].

Earth is the only planet which supports life. To support this life, resources are well distributed in every part of Earth. Earth constitutes seventy percent of water in different forms; different types of landforms are also visible from north to south and east to west. The manager of this nature is trees which give us oxygen, rainfall and many other commodities [14,15].

Now, with the growing population demands from the nature also start growing at a Rapid rate which paved the way industrialization and then there comes a new way of distinction i.e. developed and developing countries. Develop countries are known as large economies with technology advancements and develop countries are those which are trying to become developed by technology Advancements [16].

According to this classification, it can be understood that developed countries are exploiting natural resources at a faster pace and the developing countries are trying to exploit their natural resources in order to be developed. Now this type of practices will lead to resource imbalance in near future which will pave the way for devastation of nature. Natural resources which were most exploited includes mineral fuels, Iron, industrial minerals etc. These minerals are found deep inside the earth and extracted via process of mining. China tops the ranking in exploitation of these Resources and also called the biggest miner of the World. So, there is an alarming need to preserve and protect the nature in order to ensure an equitable distribution of resources and to maintain a good quality of life on the Earth [17]. The main environmental factor that causes illness and early mortality is pollution. Nearly 11 million people (about twice the population of Arizona) die too soon because Air pollution brings the world an estimated$8.6 trillion (about $26,000 per person in the US) in 2023, or 6.2 percent of global GDP, according to a new World Bank composition. The situation of pollution in India is also alarming as mega cities are the most polluting ones.

The major pollution contributors are Greenhouse gasses which are converting our Earth into heat chamber. Gases like Carbon -dioxide and methane trap the sunlight which leads to differential cleaning of earth surface. Particulate Matter (PM 2.5) which is generated by industrial waste is polluting whole world and it is impacting Mega Cities of India which is a serious concern as shown in figure 3.2. These pollutants are not only dangerous for nature but also impact human health badly. The pollution of land is also common due to several mining activities, underground discharge of polluted industrial waste which in turn causes soil degradation and pollution of groundwater which makes it unfit for consumption.

The food demand of whole world is fulfilled majorly by various agricultural practices and to carry out these Agricultural practices we require a good Quality of Soil. Due to deforestation and other polluting activities the soil which is available is not fertile enough to grow crops. Soil degradation is also a major concern which is degrading our environment day by day and requiring interference of various environment saving authorities. Factors which are responsible for soil erosion are physical degradation, chemical degradation, Wind erosion and Water Erosion.

So to tackle this major problem of pollution we need to spread green cover to all the possible parts whether it is a forest, garden, agriculture land, home etc. As trees and plants act as a filters of nature because all the harmful particles in the environment get attached to them and get converted into non harmful particles. Trees bring rainfall which can charge the groundwater and ensure uninterrupted supply of water. Overall planting trees can be helpful for our environment.

Deforestation is the removal of a forest or a group of trees from land that is then converted to non-forest uses. Deforestation can convert forested land into farms, ranches, or urban uses. Most of the cumulative deforestation occurs in tropical rainforests, which are very important to the world because they provide habitat for millions of organisms, regulate the world's climate, hold almost half of the world's rainwater, and contain useful vegetation. modern medicine. Rainforests absorb large amounts of carbon dioxide (CO_2).

About 31% of the earth's surface is by forests. Deforestation can directly lead to the loss of biodiversity when animal species - especially trees can no longer settle, migrate, and become extinct. Deforestation can lead to the permanent loss of some tree species, which affects the biodiversity of plant species [18].

Forests affect biodiversity in many ways. Trees can be removed from individual plots to produce different wood products, clear land for new buildings or roads, or create new gardens or pastures. It can also occur as a result of natural disasters or accidental fires.

The major deforestation is carried out by developed counties in order to establish Industries, large green area is cleaned by cutting trees and bushes. It makes the land less fertile and natural habitat of that area is also lost. Increasing population is also a reason of massive deforestation as to settle this increasing population forests are cleared and converted to mega cities [19].

In India also deforestation is increasing at an alarming rate. According to UN report, India is a country with world's largest population i.e. around 140 crores [20]. This increase in population has already impacted the Environment badly and India's natural resources reserves are not enough to feed this large population. The natural resources of India if consumed at this pace can lead to scarcity after a decade. Deforestation directly contributes to the greenhouse effect and causes global warming. Many trees are lost when the forest is cut down. Therefore, fewer trees will absorb less carbon dioxide and therefore there will be plenty of carbon dioxide in the atmosphere. Dangerous Greenhouse gases such as carbon dioxide absorb the sun's radiations which are reflected back by the earth. Heat absorption by carbon dioxide will lead to surface temperature to rise.

The earth's top layer of soil is normally fertile. During soil disintegration, the top layer of soil was evacuated, exposing the bottom which is hard and rough layer of dirt. This bottom layer of soil contains less moisture and is poorer in nutrients. Vegetation does not thrive in this less fertile soil. The fertile land is changed into a desert due to process of weathering. The processes by which a fertile land becomes desert is called desertification.

Deforestation causes less water vapor to enter the atmosphere, resulting in less rainfall and less water percolating into the ground. As a result, the groundwater level decreases. Droughts can occur when there is a lack of surface water and groundwater in an area owing to persistently low rainfall [21].

Deforestation poses a serious threat to this biodiversity. Deforestation causes the extinction of many species. Wild animals and birds starve to death if woods, trees, plants, and creatures are not present. Deforestation constantly results in the extinction of around 50,000 plant, animal, and insect species. The consequences of a large-scale biodiversity loss are difficult to predict, although it is highly likely that it would have a negative impact on the food chain. This biodiversity loss can devastate the nature and therefore it is a serious issue of concern. For solving this problem artificial niche can be helpful to an extent but natural recovery is the need of an hour [22,23].

Deforestation makes it easier to provide raw materials for a variety of industries. Overexploitation of wood and timber can harm the economy by reducing long-term production. Due to deforestation and other reasons, the world GDP could fall by 7% by 2050. Several people have lost their employment as a result of this.

Deforestation can facilitate the spread of a variety of infectious diseases. The spatial change of the bat population as a result of deforestation aided in the spread of the Nipah virus in Malaysia. Deforestation can easily induce oil disintegration which might result in the formation of stagnant water pools. These pools serve as breeding grounds for mosquitoes, facilitating the spread of intestinal illness and yellow fever diseases.

Social media and sensors that connect to internet networks have a chance to transform how the environmental sector and all stakeholders - society, business, and state — interact, exchange knowledge, and make choices. Social media expands the public's reach, allowing people to bring about changes in the environmental sector on every subject, from shifting away from dependence on fossil fuels to renewable energy to influencing the dynamic of present climate change talks. Another significant trend is the possibility for social media to affect the economy of circularity, a notion that goes beyond biological mimicry to explore ways that both our physical and material assets, as well as our economic assets, might reflect the earth's cycles of use, reuse, and rejuvenation [25].

5. Results

Authors In this paper, Android Studio platform is used which supported both frontend and backend services. Android Studio is the official integrated development environment (IDE) for Android app development [8]. Based on IntelliJ IDEA's powerful code editor and developer tools, Android Studio offers even more features to boost your productivity when creating Android apps.

Back-end services which are used in the paper are firebase for database and java for code implementation. Firebase is a backend service which is majorly used for database management. It provides various tools and applications to the developers which allow them to maintain the database at the backend. Firebase is used to store user info, images etc. in our paper. Java programming language forms a major part of our paper. Additionally, XML and APIs are also used.
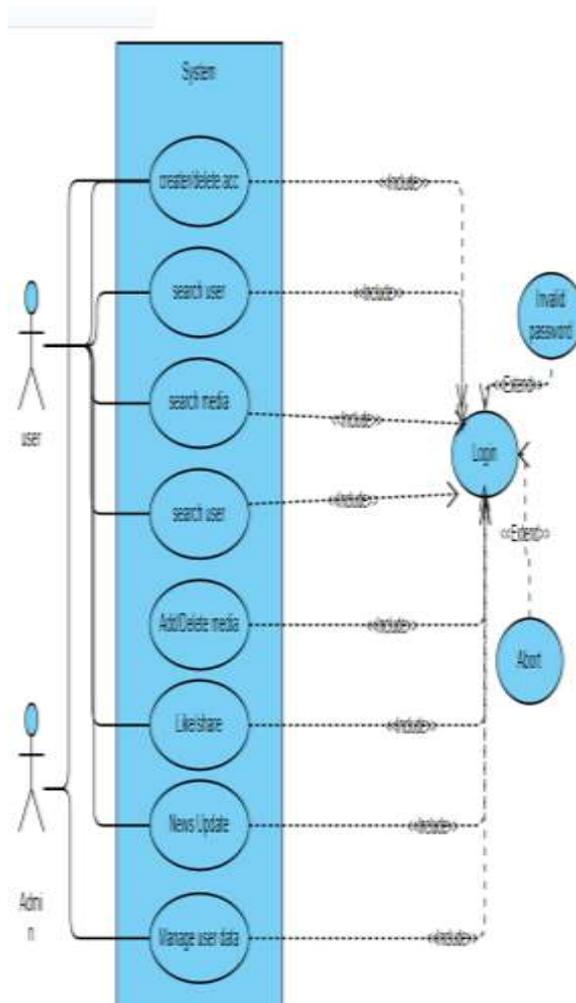
Fig. 2: Use Case Diagram

6. Conclusion

People can have an impact in the world by using social media. In terms of environmental preservation, social media might possibly serve as both a megaphone and a tallying system, demonstrating that not only are individuals seeking change, but that they are a multitude as opposed to just a few. The notoriety of natural items and the call to advance a green environment have been broadly recognized. Individuals are continually effectively taking part in genuine exercises either to create a greener way of life or to create little changes for a cleaner environment. World Environment Day succeeded in pulling in more individuals to plant trees in France for the moment time in June. Compared to final year, the number of members expanded by 5% and the number of individuals who needed to connect expanded by 10%. In expansion to government activities, the open is getting to be progressively delicate to natural alter, particularly GenZ. Without a doubt, it speaks to colossal obtaining control, sharing its voice on social media and empowering brands to centre more on maintainability through unused computerized apparatuses.

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