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An Initiative towards a cleaner
and healthier environment

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HEXART.IN INNOVATION COHORT PROGRAM

EnviroCheck

ABSTRACT

EnviroCheck aims to make the voice of the people reach the government authorities.

- The thought is to detect pollution using the people of the locality itself when a user comes across some kind of pollution he/she can put up a post which is similar to putting up a poll.
- A notification is then sent to the people in the close proximity of the polluted area and it is verified by them whether it is really a problem or not.
- If the issue is proved to be a real concern for people of that locality, the government authorities are informed about the issue and the actions taken by them are tracked and the user will be notified with the resulting action.

INTRODUCTION

The “State of the Air” 2023 report finds that after decades of progress on cleaning up sources of air pollution, nearly 36% of Americans—119.6 million people still live in places with failing grades for unhealthy levels of particle pollution.

- Air pollution is the leading environmental risk to health, causing 7 million premature deaths each year.
- Every day we come across several sources of pollution, polluting the very basics of our lives- Rivers, Land, Air and Noise. We know nothing about who/where to report it and how.
- We suggest an Innovative way to identify the sources of pollution in your area, get it prioritized through people votes, escalate it to the concerned authorities, keep a track of the progress and get notified of the actions taken.



LITERATURE SURVEY

Authors	Title	Year	Methodology
Yashvin Munsadwala; Pankti Joshi; Pranav Patel; Keyur Rana	present a paper on "Identification and Visualization of Hazardous Gases Using IoT" highlighting the adverse effects of air pollution utilizing Arduino technology and IOT	2019	Gas Detector;IoT; Micro Controller; MQTT protocol.
Tanuj Manglani; Abhigyan Srivastava; Amit Kumar; Rahul Sharma	cited a paper on "IoT based Air and Sound Pollution Monitoring System for Smart Environment" using the sensors and Arduino to provide real-time monitoring for environmental pollution	2022	IoT; Arduino.
Mandeep Kumar; S. Mini;Trilochan Panigrahi	entitled a paper on "A scalable approach to monitoring air pollution using IoT" which focuses on the scalability of the monitoring system and reducing the air-borne diseases by controlling air pollution	2018	Waspmote;IoT;Sensors;Cloud.
S. Muthukumar;W. Sherine Mary;S. Jayanthi;R Kiruthiga; M Mahalakshmi;	proposed a paper "IoT Based Air Pollution Monitoring and Control System" this was proposed in a conference on Inventive Research in Computing Applications (ICIRCA)	2018	IoT;Sensors.
Shaheduzzaman Chowdhury; MD. Shahedul Islam; Md. Kaiser Raihan; Mohammed Shahriar Arefin	cited a paper on "Design and Implementation of an IoT Based Air Pollution Detection and Monitoring System" which mainly focused on the industry	2019	Gas Sensors;IoT;Android Application.

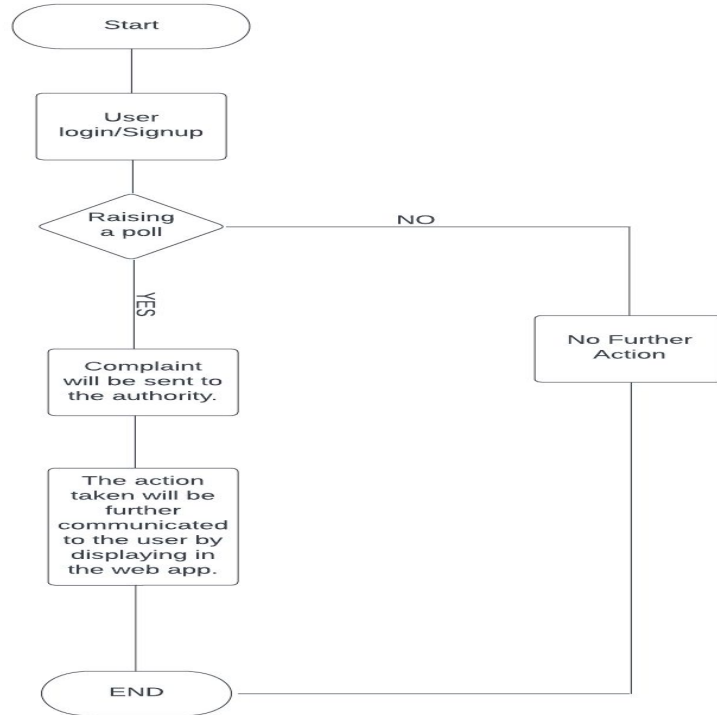
EXISTING SOLUTIONS

- Green Delhi is one of the app which has taken the same problem statement but this app is applicable only to the Delhi region.
- PCRS is another app which have mainly concentrated on pot holes. This app is used by people of Maharashtra.
- Swachhata is another app which is used to post complaints and the complaints will be directly sent to authorities without any check.

Our webapp first checks whether the complaint which is raised is true or not and if it is true then the complaint will be sent to the authority.

- We would like to make our webapp used by people of Andhra Pradesh and Telangana.

PROPOSED SYSTEM



WORKFLOW

1. User Registration:

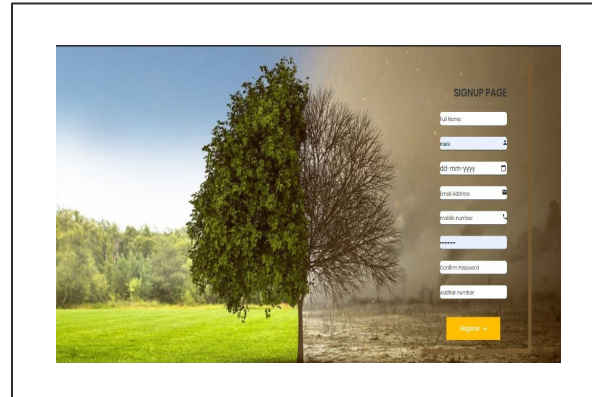
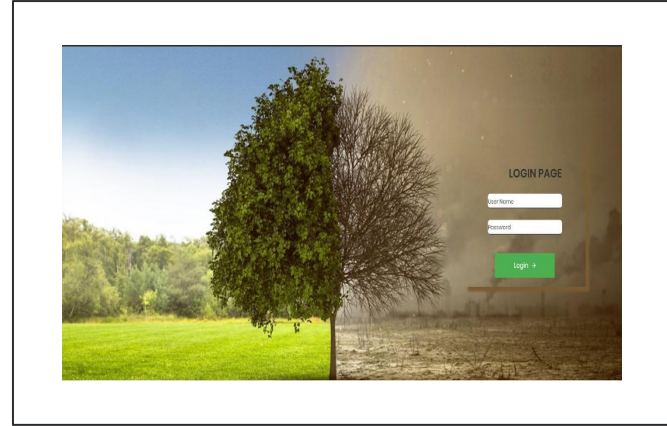
- **User Registration**

- The user first has to register with all their details to get started.

- **Account Creation**

After registration an account will be created:

- The users details are then stored in the database.
- It is used to track the users each and every action in the website.
- Store all the user related data for ease of access in the future.



WORKFLOW

2. Complaint Registration:

- **Identification of Pollution:**
 - The user first identifies the pollution being caused to his/her surrounding.
 - Once he recognizes a substance to be a polluting agent then he moves to raising a complaint.
- **Raising the complaint and poll:**
 - Then he/she takes a picture of the cause of pollution.
 - It is uploaded to the website next with all the necessary information like the locality , description about the pollution are to be mentioned.
 - Now, with the details filled and the options chosen by the user in the poll, the complaint is raised as a poll on the website.



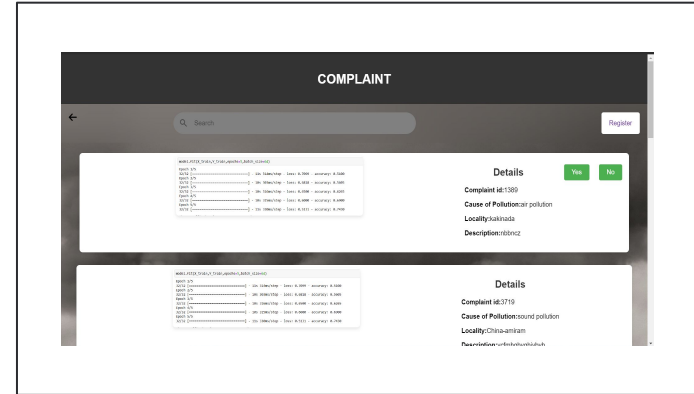
The screenshot shows a web form titled "Details of the Pollution" overlaid on a background image of industrial smokestacks emitting smoke. The form contains the following fields:

- Cause of Pollution:** A text input field.
- Locality:** A text input field.
- Description:** A text input field.
- Media:** A section with a "Choose file" button and a "No file chosen" status.
- Submit:** An orange button at the bottom right of the form.

WORKFLOW

3. Voting and escalating the poll:

- Recognize whether the complaint is genuine:
 - When a complaint is raised we take votes from the users of the website to verify whether the poll is genuine.
 - Count the votes for each of the poll raised by the users.
 - Extract the count of votes.
 - If a poll gets a good number of votes it is escalated to the concerned authority.
 - The further action taken by the authorities is also updated to the users.



TECHNICAL STACK

1. Front End:

- HTML
- CSS
- JavaScript
- Boot Strap

1. Data Base: MySQL

2. Back End: PHP

FUTURE SCOPE

1. Expand to other parts of the world:

- If we get enough recognition in AP and TS we can scale it to other parts of the country and even world too.

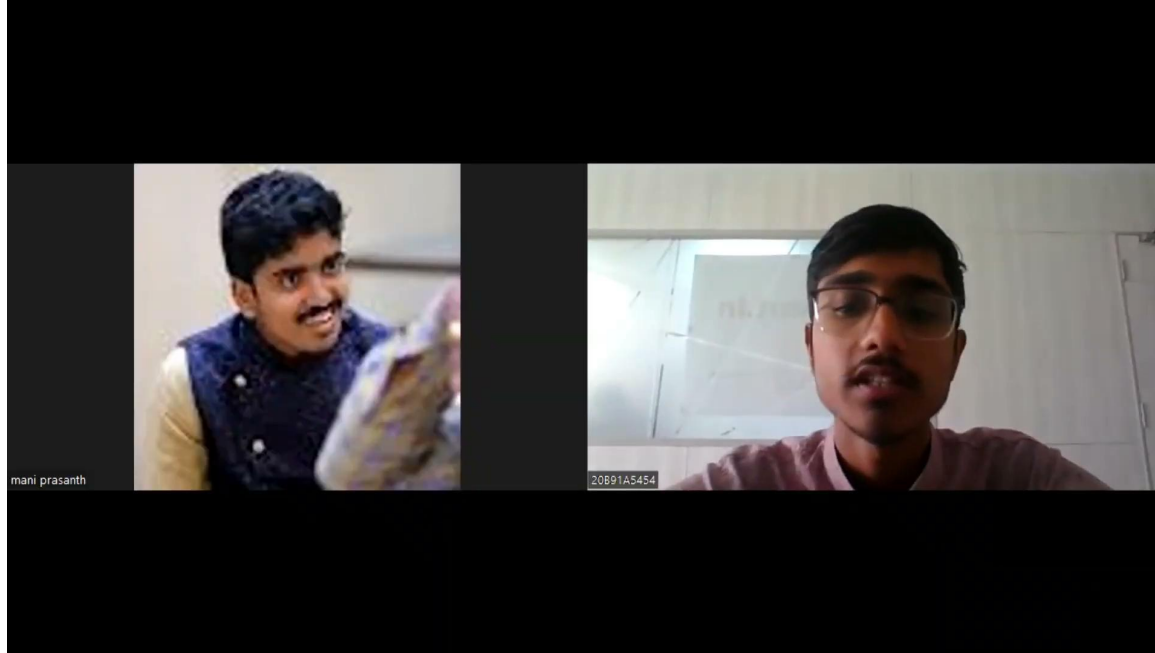
1. Improve user experience:

- **Voice Recording:** We can add a voice recording for the ease of understanding of the complaint raised.
- **Video Recording:** We can add a video recording feature to get to know the cause and the locality properly in the complaint.

CONCLUSION

- We have developed a website to raise a complaint about the pollution happening in our surroundings.
- It is a three-step process: Registering on the website , raising a complaint, voting in the polls.
- We have demonstrated a promising potential to reduce the pollution in our surroundings and making the environment cleaner through technology.
- The project has a greater potential for broader impact through integration with the government and NGO'S.

OUTCOME



Thank You

Hexart.In...an opportunity like never before!



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Implementation Partner



CSR Partner