

AI Enabled Grievance Monitoring & Response System

Inhouse Project

Project Mentor : Mrs. Geocey Shejy



Group Number : 20
Group Members :
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Introduction to Project

- Commuters in India face many problems that usually go unreported.
- Problems like potholes, loose wires, open gutters, prove to be a hindrance .
- Such problems are unattended to because making a location-aware complaint is an inconvenient affair.
- Current systems barely help the common people in their issues.
- Our app aims to automate this process with just a few clicks.

Lacuna in the existing system

- The system is not able to detect what the location of the issue is. Therefore, it cannot accurately pinpoint it on a satellite map.
- The system is limited at recognizing only road problems like potholes and misplaced dividers.
- Another drawback found is that the location once marked with an issue, is not unmarked and put as “Safe” once the issue has been solved.
- This way the people are unaware of the status of the issue.
- Also there are system that do not prioritize the issues that are being displayed.
- The local authorities are forced to pick a grievance at random and work towards the rest.

Problem Definition

- The problem that the people of India face every day is the breaking down of their city's infrastructure. What should be a clean, safe and green ecosystem is in reality a dangerous place filled with potholes, loose wires and garbage everywhere.
- What is more dangerous than these issues is the incompetence and awareness of the management of these cities. When they are not able to fix these issues in a swift fashion it leads to injuries to the common people and even worse, fatalities.
- So , we have to try our best to help the management to become aware as well as help the people of India to file complaints.
- To do so, we must reduce the effort required to file a complaint and the time it takes to reach the proper authorities. We must also make the authorities aware of the impending issues. Which will in turn result into quicker resolution of these problems.

Literature Survey

- Grievance redressal mechanism is the most important part of any administration. Yet many websites or apps follow very lengthy and tedious procedures.
- The existing grievance redressal system of the Government of India follows the same traditional manner of lodging grievances.
- The major features of such applications is lodging a complaint after registering through many forms.
- An alternative to that would be to manually file the complaints by going to the official department office.
- The grievance redressal system also helps in keeping the complainant engaged by providing step by step updates regarding his/her issue

Sr.no	Paper	Publisher	Year	Research Gaps Identified
1.	Smart E-Grievance System For Effective Communication In smart Cities	IEEE	January 2018	<p>1) Not able to detect location from where the issue is delivered.</p> <p>2) Limited to address the road and light related problems.</p>
2.	Public complaint service engineering based on good governance principles	IEEE	July 2017	<p>1) Limited area coverage for addressing the problems.</p> <p>2) The proposed application is Android-based, cannot run on IOS devices.</p> <p>3)Limited number of problem are addressed.</p>

Sr.no	Paper	Publisher	Year	Research Gaps Identified
3.	GPS based complaint redressal system	IEEE	June 2014	<p>1) Not Updating the location as safe after the grievance is solved.</p> <p>2) Unable to prioritization by area.</p> <p>3) No list of grievances is displayed(just displayed on the maps with marker).</p>
4.	Determining citizen complaints to the appropriate government departments using KNN algorithm	IEEE	2015	<p>1)No prioritization of complaints.</p> <p>2)Co-ordinate are not accurate as GPS-enabled location detection is not been used.</p> <p>3)No filtration or area-related target could be found.</p>

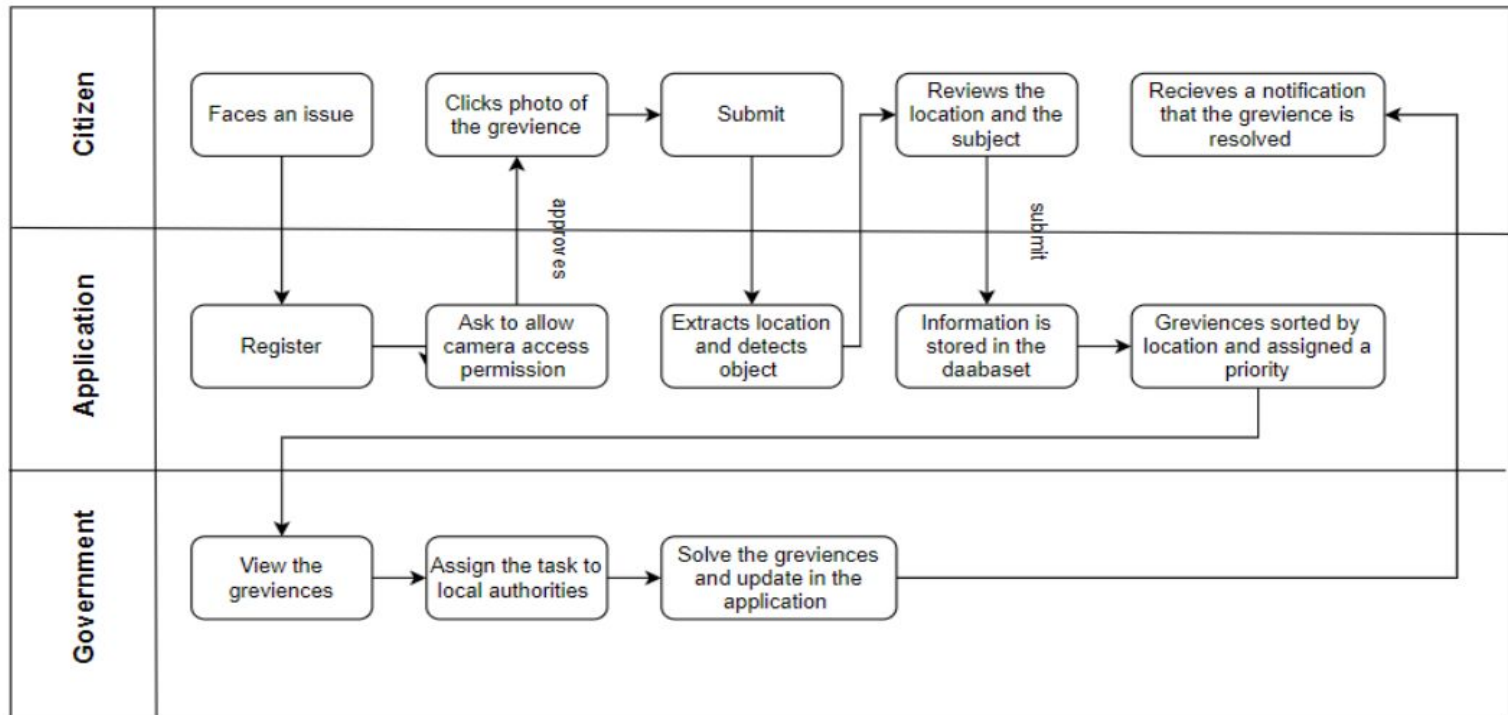
Methodology Employed

- We created an application which aims to drastically reduce the time and effort required to convey your grievance to the Govt.
- The key features of this app would be : - A smart and quick registration process using automation. - Object detection of the grievance using AI/ML. - Location grabbing using Geo-tagging of image. - Priority-based problem solving techniques. - Grievance tracking in real time.
- If brought to common use, our app can help the Government to locate and fix, the grievances that cause trouble to the people of India.

Hardware, Software and Tools

Hardware Required	Software Required	Tech. Used
<ul style="list-style-type: none">❖ Android device❖ Upto 4GB free space❖ Upto 3 GB RAM	<ul style="list-style-type: none">❖ Android version 12 or more	<ul style="list-style-type: none">❖ Android Studio❖ Firebase❖ Machine Learning

Block Diagram



Next Work Plan

- We can expand to support a wider range of languages and dialects, making grievance systems more accessible to diverse populations.
- We can also create a website for the same where users can check the status of their problem.
- Enabling voice recognition technology for users who prefer to submit grievances via voice commands or recordings would be beneficial.

Conclusion

- Thus we can conclude that the pre-existing grievance redressal system is incompetent, redundant and tedious. This leads to problems in the city's infrastructure not being solved promptly.
- Hence there is a severe need for a solution that eradicates the gaps in the current situation.
- In conclusion , our proposed system is the perfect solution that is required in this day and age, with the help of cutting edge technology like AI/ML, Geotagging and automation.

References

1. “Smart E-Grievance System for Effective Communication in Smart Cities.” Smart E-Grievance System for Effective Communication in Smart Cities | IEEE Conference Publication | IEEE Xplore, ieeexplore.ieee.org/document/8537244. Accessed 15 Dec. 2022.
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3. Geotagging (no date) Precisely. Available at: <https://www.precisely.com/glossary/geotagging#:~:text=Geotagging%20is%20the%20process%20of,stamps%20or%20other%20contextual%20information> (Accessed: December 15, 2022).
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Review-I

Inhouse/ Industry Innovation/Research: _____

Sustainable Goal: _____

Class: D17 A/B/C

Group No.: 20

Project Evaluation Sheet 2023 - 24

Title of Project: AI Enabled Grievance Monitoring and Response System

Group Members: Sudhanshu Sabale (44), Nausheen Khan (62), Pratik Sawlani (64), Saif Syed (65)

Engineering Concepts & Knowledge	Interpretation of Problem & Analysis	Design / Prototype	Interpretation of Data & Dataset	Modern Tool Usage	Societal Benefit, Safety Consideration	Environment Friendly	Ethics	Team work	Presentation Skills	Applied Engg&Mgmt principles	Life - long learning	Professional Skills	Innovative Approach	Research Paper	Total Marks
(5)	(5)	(5)	(3)	(5)	(2)	(2)	(2)	(2)	(2)	(3)	(3)	(3)	(3)	(5)	(50)
4	4	5	2	5	2	2	2	2	2	3	3	3	3	2	44

Comments: Image Data needs to be removed after issue is resolved.

Name & Signature Reviewer: Prithi Joshi

Engineering Concepts & Knowledge	Interpretation of Problem & Analysis	Design / Prototype	Interpretation of Data & Dataset	Modern Tool Usage	Societal Benefit, Safety Consideration	Environment Friendly	Ethics	Team work	Presentation Skills	Applied Engg&Mgmt principles	Life - long learning	Professional Skills	Innovative Approach	Research Paper	Total Marks
(5)	(5)	(5)	(3)	(5)	(2)	(2)	(2)	(2)	(2)	(3)	(3)	(3)	(3)	(5)	(50)
4	4	5	2	5	2	2	2	2	2	3	3	3	3	2	44

Comments: AI part need to be integrated with. Complete one type of grievance submission, addressal and data removal once addressed, then go for other kinds of grievances.