CBIT SUDHEE 2024 HACKATHON

EMERGENCY REGISTERING CHATBOT

AI ML and DATA SCIENCE

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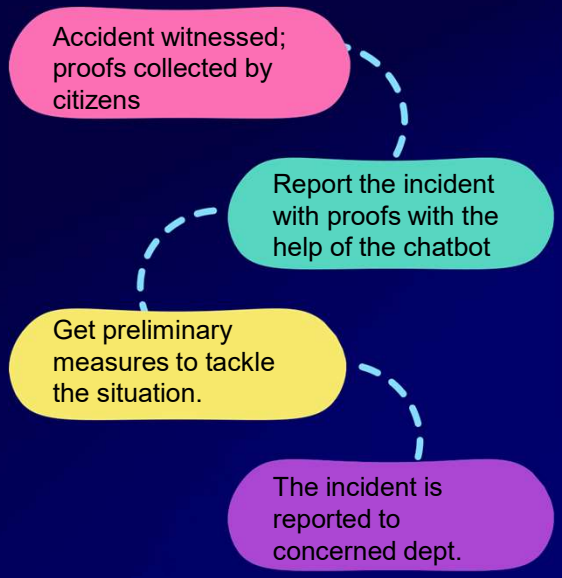
ABSTRACT

- Assistive Chatbot to help register an emergency incident/accident immediately, no waiting for operators.
- Submit preliminary information and any proofs to the respective departments via the chatbot.
- Get general first-steps to encounter the incident.
- Powered by cutting-edge AI tools like NLP, ML and a modern UI, this chatbot is efficient, robust and easy to use.



Process Flow Chart/Simulated image of Prototype/any image relevant to your idea

IDEA/PROTOTYPE

The idea revolves around developing a chatbot system to streamline the emergency reporting process, allowing users to report various emergencies (such as fire accidents, medical emergencies, etc.) through a conversational interface. The chatbot will emulate the role of a human operator, gathering preliminary information from users based on the type of incident reported. Additionally, users will be able to upload images, videos, or documents as evidence accompanying their reports. The chatbot will provide real-time updates on the status of the emergency report and may offer additional features such as multilingual support, anonymous reporting, and integration with emergency services. This prototype aims to improve the efficiency and effectiveness of emergency reporting systems, ultimately contributing to quicker response times and better emergency management outcomes.

TECH STACK

- Python
- AI, ML ,ANN - Deep Learning resnet50
- TensorFlow
- NLP
- Web Technologies
- Django / Flask
- MongoDB
- AWS
- Wit.ai
- all-MiniLM-L6-v2 sentence transformer

USECASES

1.Emergency Reporting: Allow users to report various emergencies such as fire accidents, medical emergencies, road accidents, natural disasters, etc., through the chatbot. Users can provide details such as location, type of emergency, and any additional information required for effective response.
2.Evidence Submission: Enable users to upload images, videos, or documents as evidence accompanying their emergency reports. This can include photos of the accident scene, medical records, or any other relevant documentation to assist emergency responders in understanding the situation better.
3.Real-Time Updates: Provide real-time updates to users regarding the status of their emergency report, such as confirmation of receipt, estimated response time, and any follow-up actions taken by emergency services.
4.Emergency Preparedness Information: Offer users information and resources on emergency preparedness, including safety tips, evacuation procedures, and contact details for relevant emergency services.
5.Language Translation: Support multilingual capabilities to cater to diverse user populations, ensuring that individuals who speak different languages can effectively communicate their emergencies and receive assistance.
6.Anonymous Reporting: Allow users to report emergencies anonymously if they prefer not to disclose their identity, ensuring that individuals feel comfortable seeking help without fear of repercussions.
7.Integration with Emergency Services: Integrate the chatbot with existing emergency response systems to automatically dispatch appropriate services based on the reported emergency type and location, improving response times and coordination.
8.Community Engagement: Foster community engagement by enabling users to share emergency preparedness tips, safety advice, and personal experiences with others through the chatbot platform, creating a supportive and informed community.

These use cases demonstrate the versatility and potential impact of the chatbot solution in enhancing emergency reporting and response processes, improving user experience, and ultimately contributing to safer and more resilient communities.

Relevance and USP

What makes this project unique is its focus on integrating multimedia capabilities (such as image and file uploads) into the emergency reporting process. This allows users to provide tangible evidence alongside their reports, facilitating quicker and more informed responses from emergency services. Additionally, the chatbot's conversational interface and real-time updates enhance user experience and engagement, distinguishing it from traditional emergency reporting systems.

Dependencies

1. Accuracy of NLP Algorithms
2. File Data Extraction
3. Integration with Emergency Services
4. Data Security and Privacy

TEAM CONTACT DETAILS

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Side Note:

We have uploaded our work on GitHub at the following link

gjaynir0508/sudhee-hackathon-2024: Bit Brigade's Codebase with a solution for ML Problem Statement 6 (github.com)

We will keep the updated versions of the PPT there as well. If you could be a little considerate, we would like you to view that as well.

- Team Bit Brigade

THANK YOU