

# Disaster Response Buddy - AI-Powered Emergency Assistant

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## Project Overview:

Disaster Response Buddy is an AI-driven, real-time emergency support system developed using Google AI technologies such as the Gemini API, and deployed through Streamlit. It leverages Generative AI, basic image classification, and RSS-based alerting to support individuals during crisis situations such as earthquakes, floods, storms, or fires.

## Project Goals:

1. Deliver life-saving information instantly using Generative AI (Gemini).
2. Provide quick situation assessment through image uploads.
3. Aggregate real-time alerts using public RSS feeds.
4. Enable extensibility for voice input, maps, mobile alerts, and more.
5. Foster open innovation using free, accessible AI tooling.

## Core Technologies Used:

- Streamlit: UI Framework
- Gemini API: Generative AI
- Feedparser + RSS: Real-Time Alerts
- Python 3.8+
- Optional: Google Maps API, Cloud Run, Vertex AI Vision

## Functional Modules:

1. Gemini-Powered Text Q&A: Uses Gemini API to answer emergency questions.
2. Image-Based Scene Assessment: Allows users to upload photos for damage detection.

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3. Real-Time Alerts via RSS Feeds: Pulls alerts from national weather and emergency services.

Architecture:

Streamlit UI communicates with the Gemini Q&A engine, RSS feed parser, and optional image and intent classifiers.

Project Structure:

app/

main.py (Streamlit UI)

gemini\_utils.py

image\_analysis.py

vertex\_intent\_model.py

rss\_alerts.py

requirements.txt

README.md

CONTRIBUTING.md

Key Features:

- Real-time Gemini Responses
- RSS-Powered Alerts
- Mocked Image Understanding
- Clean and responsive Streamlit UI

Impact & Applications:

- Public Safety

## **Disaster Response Buddy - AI-Powered Emergency Assistant**

- Humanitarian Relief
- Rural Access
- Education
- Government Emergency Services

### Privacy & Safety Considerations:

- No data stored
- Gemini API secured via env vars
- Verified alerts only
- No image persistence

### Potential Future Enhancements:

- Voice input (Google Speech-to-Text)
- Maps & shelter guidance
- Multilingual support
- Real-time camera input
- SMS alerts (Twilio)

### Testing and Deployment:

- Local: `pip install -r requirements.txt`
- Deploy on Streamlit Cloud or Google Cloud Run

### Contribution:

Fork the repo, set API key, and run via `streamlit run app/main.py`

# **Disaster Response Buddy - AI-Powered Emergency Assistant**

License:

MIT License

Contact:

Maintainer: [Your Name]

Bootcamp: Google AI Bootcamp 2025 - Open Innovation

GitHub: [github.com/yourusername/disaster-response-buddy](https://github.com/yourusername/disaster-response-buddy)