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# NATURAL LANGUAGE CHATBOT

BY TEAM ELNADI



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# Natural Language Chatbot

## Introduction

Innovative technologies that give people access to real-time information on environmental conditions and impending natural catastrophes are desperately needed in this day of environmental uncertainty and rising natural disaster frequency. In order to meet this demand, this project will create a Natural Language Chatbot that will seamlessly integrate information on environmental conditions and natural disasters, giving users a thorough awareness of the safety and condition of Africa.

## Problem Description

Dispersed information about disasters and environmental monitoring are currently lacking. It's common for users to have to switch between various platforms in order to find relevant information, and there isn't enough integration of these features into a single, conversational interface. The goal of this project is to accelerate this procedure by developing an approachable chatbot that can answer questions about temperature, ocean conditions, and natural disasters. The objective is to promote a better understanding of the interaction between environmental conditions and potential risks while increasing user awareness and readiness.

## Existing Solution

While there are existing solutions addressing environmental conditions or natural disasters independently, the integration of both elements into a single chatbot is a novel approach. Some weather applications provide information on environmental conditions, and disaster alert systems offer insights into natural disasters. However, none seamlessly combine both aspects in a conversational format, hindering a holistic understanding for users.

## Proposed Split

Team	Responsibility	Team Members
Data Sourcing	Responsible for collecting and curating real-time and historical data on environmental conditions and natural disasters	All members
Data Cleaning and Prep.	Preprocessing, cleaning and manipulating the collected data	All members
Model	Fine-Tune and customize the NLP model for user intent recognition and response generation	All members
Model Deployment	Develop the backend system for hosting the chatbot model and the frontend interface for user interaction.	All members

Develop the backend system for hosting the chatbot model and the frontend interface for user interaction.

## Proposed Timeline

Data Sourcing: 1-3 weeks

Data Cleaning and Prep: 3-4 weeks

Model Development: 4-6 weeks

Model Deployment: 4-5 weeks

## Conclusion

The proposed chatbot has the potential to revolutionize the way individuals access and comprehend environmental conditions and natural disaster information. By integrating these elements into a unified platform, users can make informed decisions and take proactive measures for their safety. The application's usefulness extends to emergency response teams, researchers, and the general public.

## References

National Oceanic and Atmospheric Administration (NOAA): <https://www.noaa.gov/>

United States Geological Survey (USGS): <https://earthquake.usgs.gov/>

Global Disaster Alert and Coordination System (GDACS): <https://www.gdacs.org/>