

Mental
HealthBot

Natural Language Processing

Project

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Introduction

- *Mental health issues are on the rise globally, with millions affected.*
- *Early detection is crucial for effective intervention.*
- *NLP offers a scalable and accessible approach to analyzing text for signs of mental health issues.*
- *Objective: Develop an NLP-based system for detecting mental health conditions such as anxiety, depression, and stress.*

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Scope

- *Implement an NLP model to analyze text for mental health indicators.*
- *User-friendly interface for inputting text.*
- *Detect conditions like anxiety, depression, and stress.*
- *Provide feedback and suggest resources for mental health support.*
- *Continuous refinement based on user data and performance evaluations.*

Features



TEXT ANALYSIS:

Analyze user-provided text for mental health cues.



CONDITION CATEGORIZATION:

Classify input into categories (e.g., depression, anxiety).



DISEASE DETECTION

it helps user diagnose if he/she suffering from any disease.

Technologies used:

*Transformer-based Models:
BERT for understanding context in text..*

Data Preparation Steps:

*Import necessary modules, such as Pandas, NumPy,
Load dataset into a Pandas DataFrame.
Preprocess text by removing punctuation, converting to
lowercase, and handling missing values.*

Technologies used:

Use TF-IDF vectorization for text representation.

Model Implementation:

Use Linear SVC for intent classification.

Train-test split of the dataset.

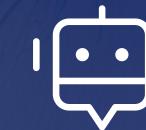
*Evaluate using metrics like accuracy, precision, recall,
and F1-score.*

Visualize results using Plotly bar plots for clarity.

Conclusion:

- *NLP-based mental health detection systems offer a novel way to identify early signs of mental health issues.*
- *Scalable, accessible, and impactful for promoting mental well-being.*
- *Encourages proactive mental health care and supports individuals in need.*
- *A step towards integrating AI for societal good.*

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Presented By

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Thank you for Listening to Our Presentation.

Link To project are as followed:

BSSE 7thA



<https://colab.research.google.com/drive/1CBMtVNZImPBoABNY5M0D8zAJpEhHSJuY?usp=sharing>