

Problem Statement Worksheet (Hypothesis Formation)

Can a chatbot built with GPT-2 provide mental health advice?

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1 Context

Mental and physical health are equally important components of overall health. Mental health plays a huge role in general well-being and can affect physical health. Poor mental health can lead to poor physical health or harmful behaviors. An AI-based chatbot can be used as one of the primary care tools to improve general well-being. It can also benefit people who are hesitant to seek professional help due to anxiety caused by stigma and prejudice around mental illness.

2 Criteria for success

A chatbot that shows an ability to express sensible, relevant to the topic and human-like thinking, as well as strong grammar and spelling.

3 Scope of solution space

- To scrape Reddit's r/mentalhealth subreddit, specifically focusing on the post titles and comments.
- To perform EDA on the dataset.
- To train GPT-2 on the data to test the efficacy of mental health advice.
- To create a web app where users can generate text from GPT-2 based on their issues.

4 Constraints within solution space

- A disclaimer needs to be added regarding the fact that the advice will be given by an AI and not a mental health professional and therefore can only be used for educational and entertainment purposes.

5 Stakeholders to provide key insight

- Yuliya Selevich

6 Key data sources

<https://www.reddit.com/r/mentalhealth/>

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