Exercises based on sentimental analysis using Roberto model and Naïve byes model

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Abstract

In this research paper, we introduce **"Body Boost"** a fitness app that goes beyond the usual exercise routines. Body Boost is all about making you feel good, both mentally and physically. Using models like the Roberto pre-trained model and a Naive Bayes trained model, it can understand how you're feeling by checking your social media. We use this info to give you personalized fitness exercises. One of the primary objectives of the Body Boost app is to provide personalized exercise recommendations based on users' mental states derived from sentiment analysis. The other objective is to determine which model yields the highest accuracy in understanding users' emotions. By integrating models such as the Roberto pre-trained model and Naive Bayes trained model, our goal is to accurately assess users' emotional states through social media cues.

Introduction

Physical activity can help people maintain a healthy weight and lower their chance of developing a variety of chronic conditions and many diseases. Despite this information, adults and children in many nations, countries do not engage in physical activity on a regular basis or any physical games. Researchers have never-before-seen chances to learn and adopt more about the health advantages of physical activity thanks to recent advancements in physical activity monitoring

The main motive in our mind is to develop a fitness app so that it will facilitate user and nutritionist both. Our App will provide users with personalized workout and diet plans tailored to their emotional states, contributing to holistic well-being. To

give good diet   and exercise but looking at his mental state, the detection will be performed using Machine learning models.

In our fast-paced lives, we often struggle to stay healthy while dealing with different emotions like stress or happiness. The problem is current fitness apps don't really understand our feelings. They give us the same exercises and diet plans, no matter how we're feeling. This disconnect means we miss out on personalized advice that matches our emotions. The motivation for a new solution is clear. We need a smart system that understands our feelings in real-time. Using this system, we can create personalized workouts and diets that match our feelings, making it much easier to stay healthy and happy.

Literature review

Studies have showed that a variety of researchers from across the globe are working on sentimental analysis, health and fitness but very little work has been done on fitness app which takes user mental health and suggest workout plan and diet.

- **Fitbit:** Offers activity tracking and give exercise and calculate the mass of our body.
- **MyFitnessPal:** Provides a similar service with comprehensive meal tracking and dedicated workout.
- **Nike Training Club:** Gives customized workout plans**.**
- **7 Minute Workout:** Gives a quick and focused workout.

Strengths:

- These application gives a wide range of trackers that monitors various activities.

- Some of the apps provides valuable insights into user and helping them make informed choices.

- App often include variety of workouts and catering to different fitness level.

Weaknesses:

- Users find this app difficult to use, especially new member.

- Some advance features behind a premium feature, which may deter budget conscious user.

- Lack of information of the user mental health led it to the lack of wellbeing of the user.

Proposed model

Facebook Al developed RoBERTa (short for "Robustly Optimized BERT Approach") which is the variant of BERT (Bidirectional Encoder Representations from Transformers) model. it is transformer-based language model. In BERT, the system learns by predicting intentionally hidden parts of sentences in unannotated language examples. There were two key changes in Roberta. It removes BERT's next-sentence pretraining objective (NSP). And RoBERTa was trained on a much larger dataset

The training data includes existing unannotated NLP datasets and a new set called CC-News, derived from public news articles. The model achieves an overall score

of 88.5 on the GLUE benchmark, which stands for General Language Understanding Evaluation. This benchmark consists of multiple NLP tasks. The GLUE leaderboard refers to the ranking system for models participating in the General Language Understanding Evaluation (GLUE) benchmark. It is designed to evaluate the general language understanding capabilities of models. We also match state-of-the-art results on SQuAD. SQuAD stands for the "Stanford Question Answering Dataset." SQuAD is designed to evaluate the ability of computer systems to understand and answer questions posed by humans based on a given passage of text.