ABSTRACT

FitQuest is an innovative fitness application designed to enhance users' workout experiences by integrating real-time body tracking and goal-setting functionalities. Leveraging the capabilities of advanced computer vision and machine learning technologies, FitQuest allows users to create personalized accounts, access a comprehensive dashboard, and engage in guided exercise routines.The core feature of FitQuest is its ability to track users' movements in real-time using the OpenCV and MediaPipe libraries. This body tracking system accurately detects and monitors key body landmarks, enabling precise counting of exercise repetitions and ensuring proper form. As users follow along with the exercise routines, the system provides immediate feedback and counts the repetitions performed.FitQuest sets daily exercise goals tailored to each user's fitness level and preferences. Users are encouraged to meet these goals through a rewards system, which provides incentives and motivation to maintain consistent workout habits. By achieving their daily targets, users can earn rewards, fostering a sense of accomplishment.

Key features of FitQuest include:

* Account Creation and Dashboard: Users can create accounts, access a personalized dashboard, and view a variety of exercise routines.
* Real-Time Body Tracking: Utilizing MediaPipe's pose detection model, the app tracks users' movements and counts repetitions during workouts.
* Goal Setting and Rewards: Daily exercise goals are set, and users receive rewards for meeting these targets, enhancing motivation and commitment.
* Comprehensive Exercise Library: A wide range of exercises is available, catering to different fitness levels and preferences.
* The development of FitQuest highlights the integration of modern computer vision techniques with fitness applications, offering an engaging and interactive workout experience. By combining real-time feedback, goal setting, and rewards, FitQuest aims to promote healthier lifestyles and help users achieve their fitness goals effectively.

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