

Submission Summary

Conference Name

International Conference on NextGen Data Science and Analytics

Paper ID

346

Paper Title

YogaSensei –Machine learning-based platform for tailored yoga sessions

Abstract

Numerous new yoga students have the danger of getting injured and having a low compliance rate due to inappropriate routines and the inability to receive real-time posture advice on static online platforms. This paper presents an online smart aid, YogaSensei, which can provide safe yoga to people in a personalized manner. The platform combines three important technical features to surmount the delivery of the current solutions: a Random Forest recommendation model that creates session plans that are goal-oriented and daily to deliver; a Rule-Based Filtering layer, which serves as a hard safety constraint, excluding poses inappropriate to the health data of the user; and a Real-Time Computer Vision module (with the use of MediaPipe), which identifies crucial joint angles and offers immediate corrective text feedback. Moreover, the system includes Adaptive Learning Feedback Loop which adjusts the user skill characteristics with the recommendation model according to the correct score in the measurement of the pose in the past sessions. This new loop system will guarantee that soon recommended routines will be gradually adjusted to the proven facility of the user, making yoga safer and more efficient, as well as encouraging long-term participation of the user.

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Primary Subject Area

Data Science & Analytics

Secondary Subject Areas

Artificial Intelligence & Machine Learning

Submission Files

Submission Questions Response

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