

Online Yoga Asana Trainer Using Deep Learning

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Abstract : Yoga is an advanced, well-recognized method with roots in Indian philosophy. Yoga benefits both the body and the psyche. Yoga is a regular exercise that helps people relax and sleep better while also enhancing their balance, endurance, and concentration. Yoga can be learned in a variety of settings, including at home with the aid of books and the internet as well as in yoga studios with the guidance of an instructor. Self-learning does not teach the proper yoga poses, and doing them without the right instruction could result in significant injuries. We developed "Online Yoga Asana Trainer using Deep Learning" so that people could practice yoga without a teacher. Our project is developed using Tensorflow, Movenet, and Keras models. The system makes use of data from Kaggle that includes 25 different yoga poses. The first part of the process involves applying the movement model for extracting the 17 key points of the body from the dataset, and the next part involves preprocessing, which includes building a pose classification model using neural networks. The system scores a 98.3% accuracy rate. The system is developed to work with live videos.

Keywords : yoga, deep learning, movenet, tensorflow, keras, CNN

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