

# **Implementation of Yoga Pose Estimation and Feedback Mechanism using Pose Detection for Self Learning**

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August 17, 2021

## **Abstract**

Living in this modern era, the brain is constantly engaged in hectic work and never rests in tranquility. As a result, there is a lack of focus on things, skills and vitality. Yoga which was developed in ancient India has numerous benefits such as relaxation of the mind, increased flexibility, metabolism, blood flow etc. Beginners should strictly avoid doing yoga poses without supervision as slight errors can even lead to injuries and deformities. The pandemic has made it even harder for people to have an in-person trainer who can help the learner through supervision. This demands the requirement of an application that takes an asana as input from the learner and helps to improvise the yoga postures through feedback. The proposed system assesses the Yoga posture of a learner by detecting the human body first using the webcam, extracting the coordinated points of various joints in the body, calculating the difference of body angles between the trained pose images and that of the learner and finally provide real-time feedback on improvisation of the incorrect parts between learner and the trained images.

## **Keywords**

Yoga, Pose Assessment, Body Angle, Self-learning, Evaluation